

Regional Health Status Indicators Massachusetts



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NOTE TO READERS

Background

This report presents important health indicators for your region, which were developed as background material for the Regional Health Dialogues being held across the Commonwealth in May and June 2007. These dialogues offer an opportunity for you to have a conversation with the Commissioner of Public Health, learn the latest health information for your region, identify your resources and areas of need, and together, with the Massachusetts Department of Public Health, shape a public health partnership.

Contents

This report provides information about the socio-demographics, health care access, births, deaths, major chronic and infectious disease rates, substance abuse, and injury and violence for your region. Your region's indicators are compared with those of other regions and to the state as a whole in order to provide you with a sense of the relative health of your region. Many indicators for your region are stratified by race, Hispanic ethnicity, and age in order help determine specific population groups that may require targeted health interventions. We have also provided information about the health status of one or more large communities in your region, which may be influencing your regional outcomes. We hope that this collection of important and diverse health indicators will stimulate discussions of local health priorities, as well as serving as a resource for health information and a reference for data that are available from the Massachusetts Department of Public Health. Please contact us with your comments and suggestions.

INTRODUCTION

Goals for holding Regional Dialogues

- Introduce new DPH leadership
- Present latest health data on your particular region
- Talk with residents and providers about data and identify areas of need
- Gather feedback to inform process of setting DPH priorities

Goals of New DPH leadership

- Use data and community input to set new priorities & reshape the Department
- Rely on science and evidence-based process to guide the work
- Strengthen ties with and support for local health and local agencies
- Increase resources to and visibility of public health in Massachusetts

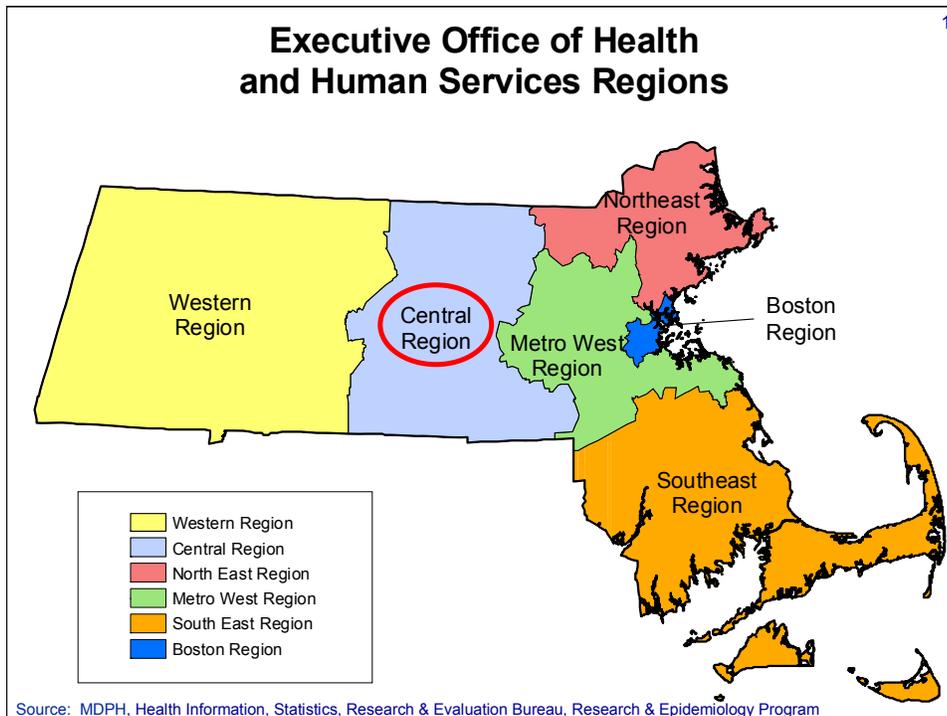
Timetable

- Hold 8 regional dialogues with comprehensive data review and identification of key health concerns (by July)
- Identify short list of top priorities by end of August
- Hold second round of community dialogues to discuss action plans/results by end of calendar year

SOCIODEMOGRAPHIC INDICATORS

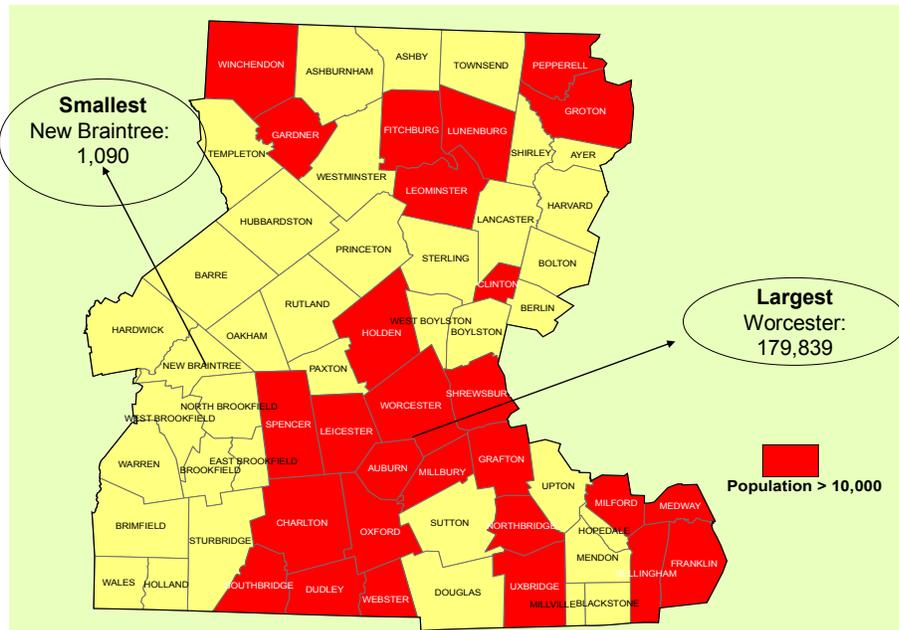
A few comments about the limitations of this presentation

- A regional analysis has its drawbacks
- Variability within a region – urban vs. rural/suburban (i.e. Worcester vs. the rest of the region)
- Variability by sub-population – race matters, poverty matters
- Our data don't reflect all the important health indicators



Population in Towns in Central Region: 2005

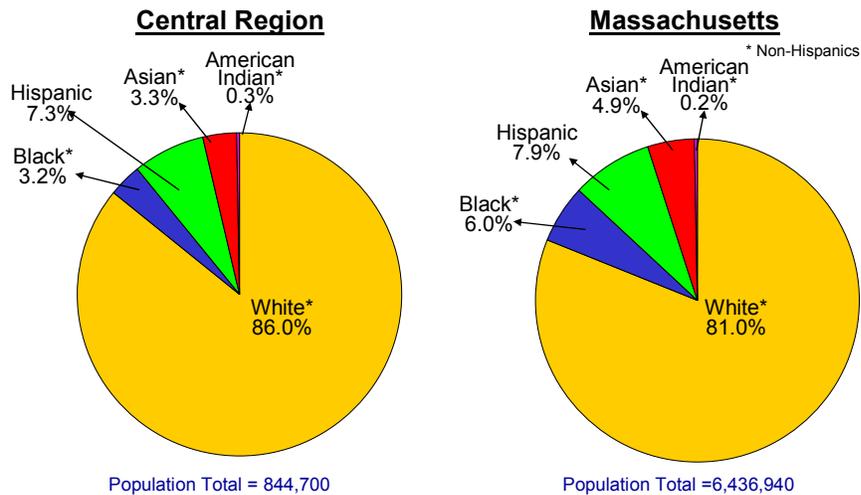
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Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Race and Ethnic Breakdown of Population Central Region and Massachusetts: 2005

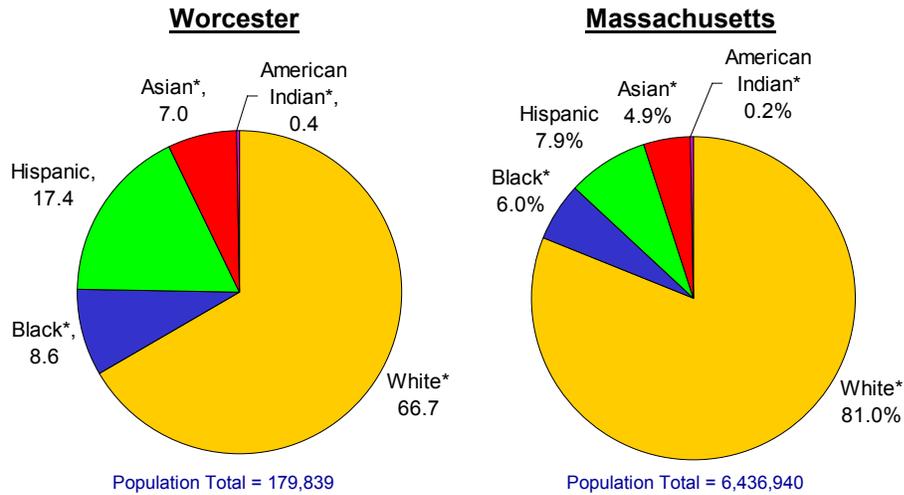
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Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

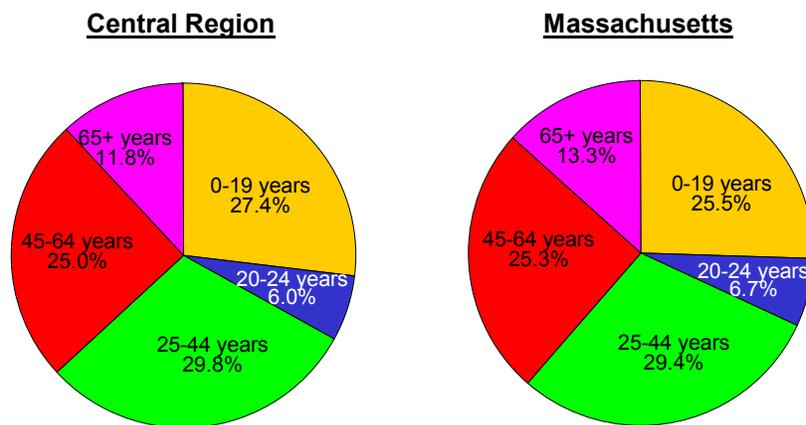
Race and Ethnic Breakdown of Population Worcester and Massachusetts: 2005

* Non-Hispanics



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Population by Age Group Central Region and Massachusetts: 2005



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Language Spoken at Home, Western Region and Massachusetts: 2000

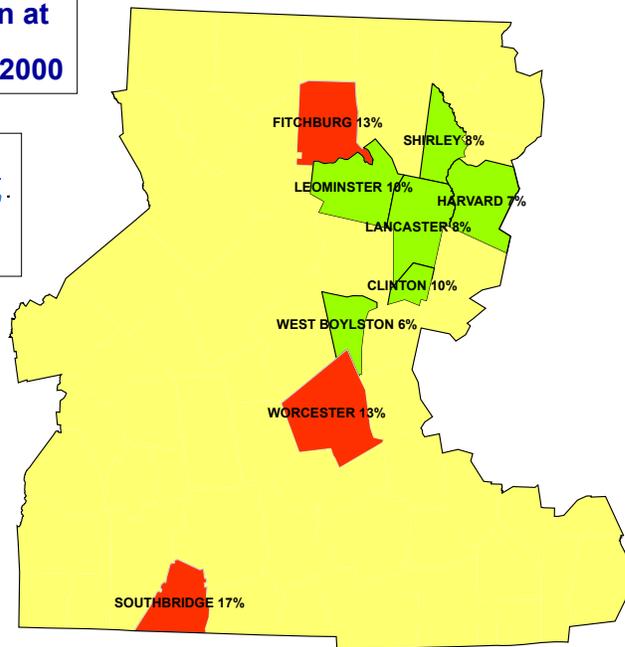
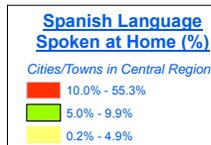
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	Central Region	Massachusetts Overall
Only English	85.7	81.3
Spanish or Spanish Creole	5.8	6.2
Portuguese or Portuguese Creole	0.7	2.7
French	1.9	1.4
Chinese	0.3	1.2
Italian	0.6	1.0
African Languages	0.4	0.2
Russian	0.2	0.6
Vietnamese	0.7	0.5
Polish	0.7	0.5

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Spanish Spoken at Home Central Region: 2000

7



5
Miles

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Socio-Demographic Indicators Central Region and Massachusetts: 2000

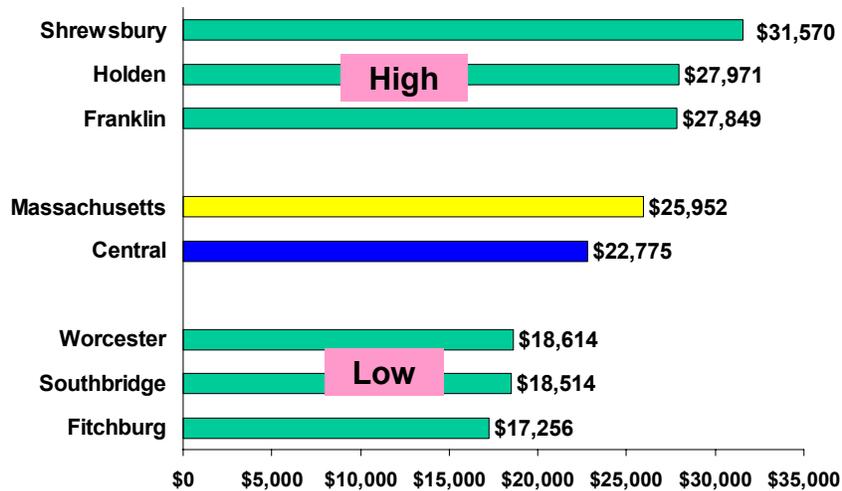
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	Worcester	Central Region	Massachusetts Overall	US Overall
Per Capita Income	\$18,614	\$22,775	\$25,952	\$21,587
Those living below 100% poverty	17.9%	8.8%	9.3%	12.4%
Children < 18 living below 100% poverty	25.5%	11.2%	12.0%	16.1%
Less than a High School Education	23.3%	16.2%	15.2%	19.6%
Foreign born	14.5%	7.4%	12.2%	11.1%
Unemployed	6.9%	5.4%	5.1%	5.5%

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Highest and Lowest Per Capita Income Communities¹ in Central Region: 2000

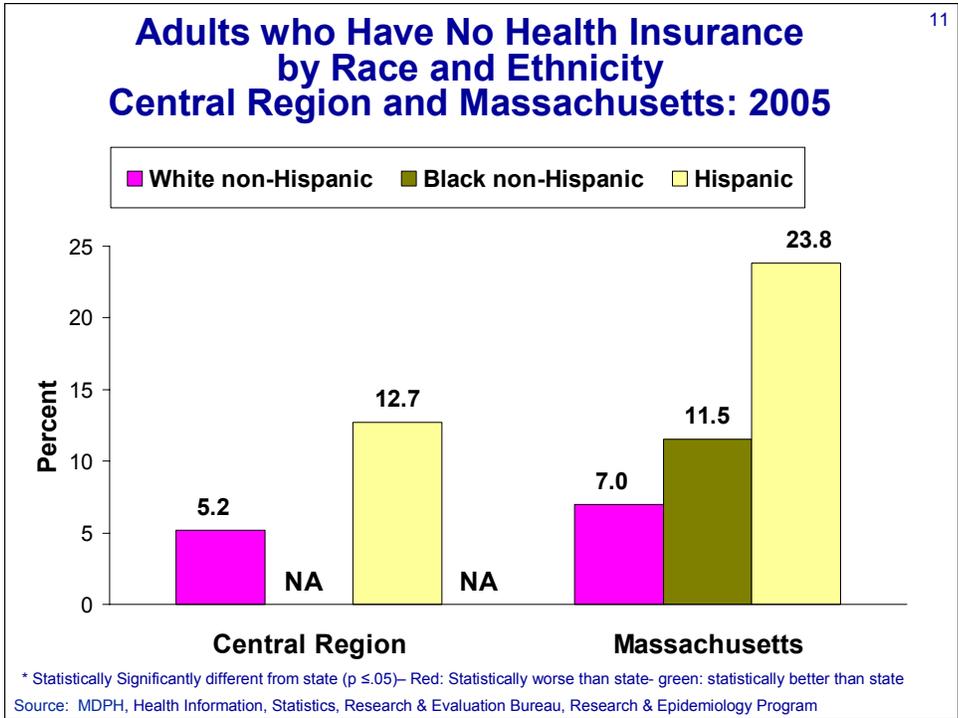
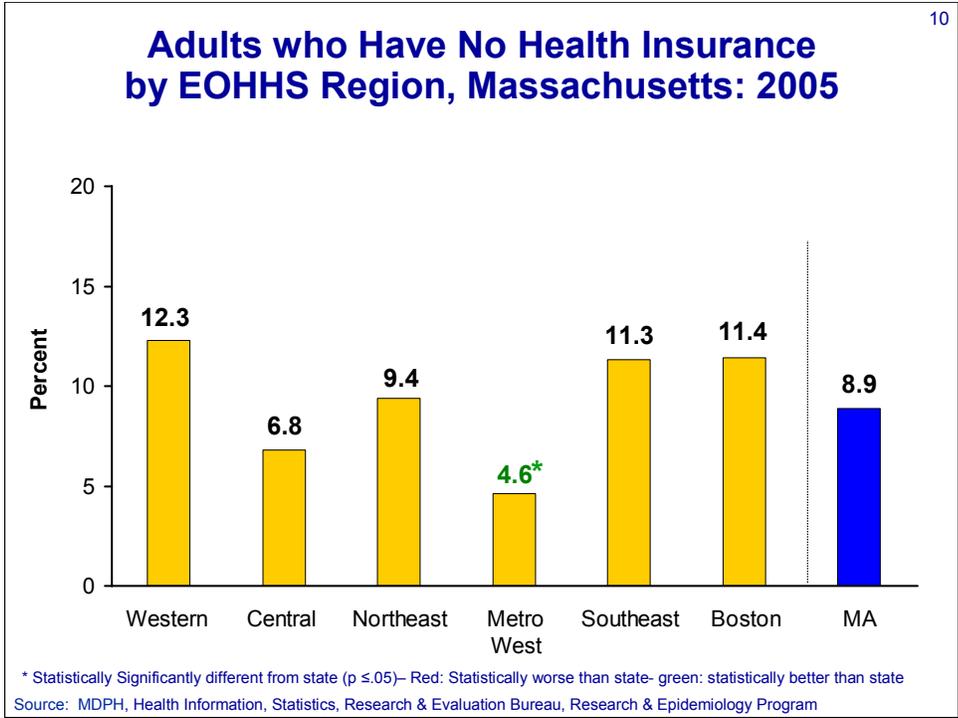
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¹ Selected among communities with at least 10,000 population

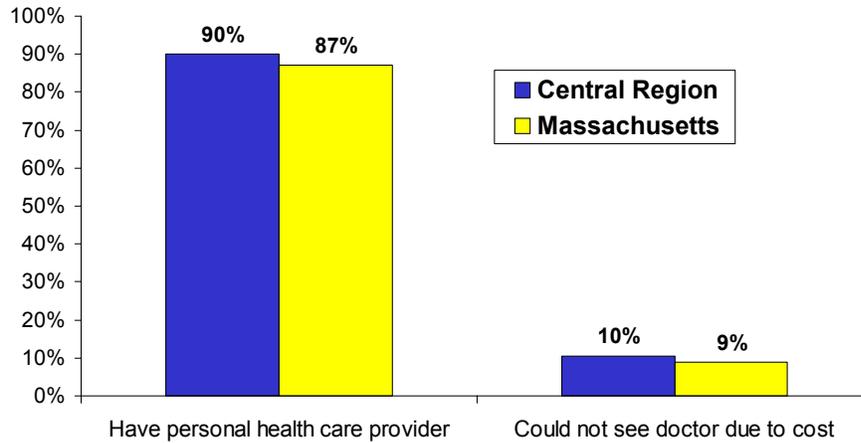
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

HEALTH CARE ACCESS



Health Insurance Access Central Region and Massachusetts: 2005

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* Statistically Significantly different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Summary Indicators for Health Insurance by EOHHS Regions, Massachusetts: 2005

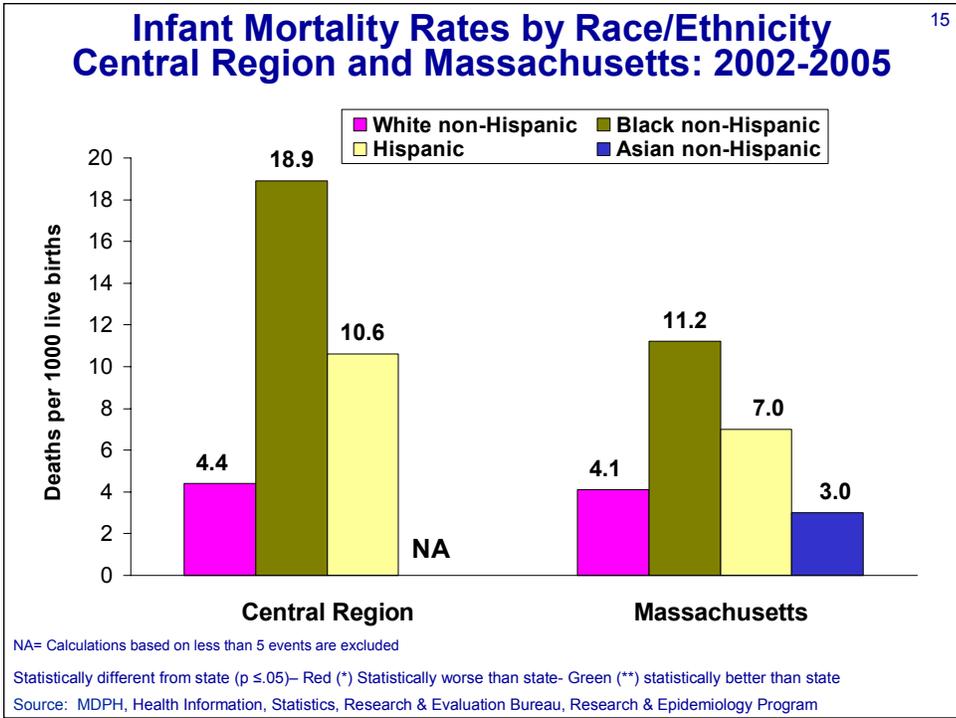
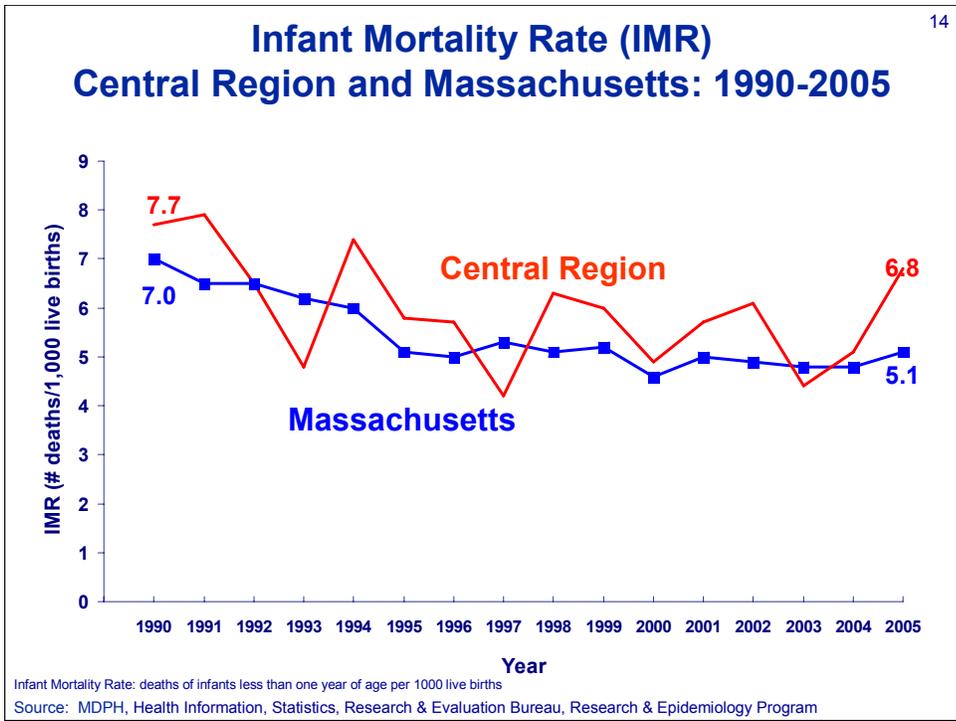
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Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Adults with no health insurance	8.9	12.3	6.8	9.4	4.6	11.3	11.4
% Adults who have a personal health care provider	87.1	85.3	90.0	85.8	90.3	88.2	78.3
% Adults who were unable to see a doctor due to cost	8.8	10.4	10.4	7.8	7.0	9.2	9.4

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

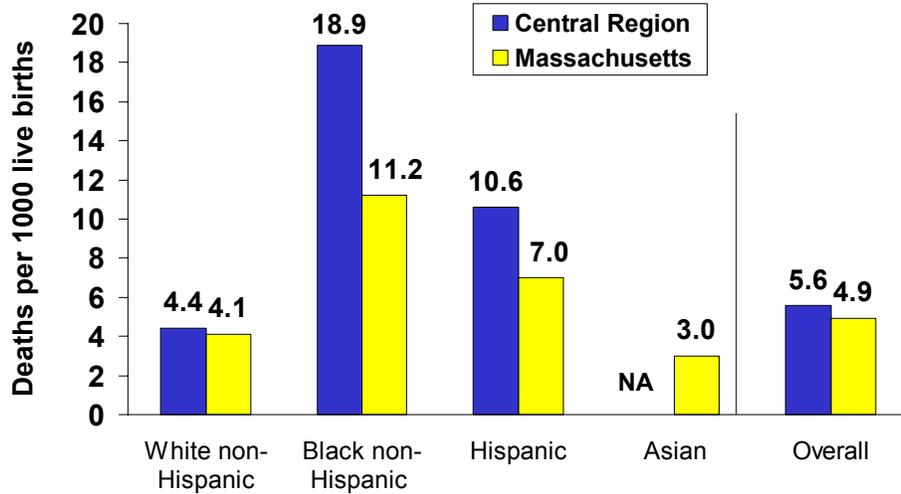
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

BIRTH INDICATORS



Infant Mortality Rates by Race/Ethnicity Central Region and Massachusetts: 2003-2005

16



* Statistically Significantly different from state ($p \leq .05$) NA= Calculations based on less than 5 events are excluded
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Highest Infant Mortality Rates Among the 30 Largest Communities¹ Massachusetts: 2005

17

	IMR	95% CI ²	Number of Deaths
State	5.1	[4.6, 5.6]	391
Worcester	13.9*	[9.4, 18.4]	36
Malden	11.4	[4.0, 18.7]	9
Revere	10.9	[2.9, 18.9]	7
Springfield	10.6*	[6.4, 14.7]	25
New Bedford	8.6	[3.8, 13.5]	12

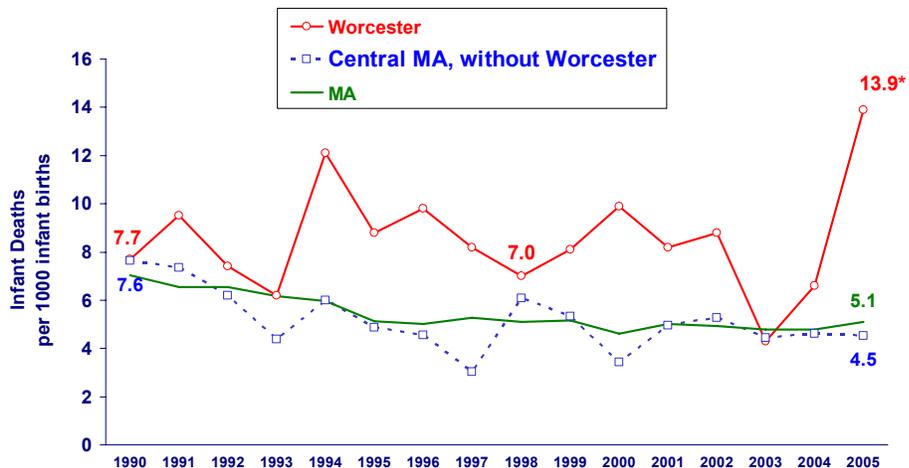
¹Selected among the 30 Massachusetts communities with the largest populations. IMR = infant deaths per 1,000 live births.

²A Confidence Interval for a population parameter is a range in which you are 95% certain that the true population estimate is within. It is a function of variability and the number of events.

* Statistically Significantly different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Infant Mortality Rate (IMR) Worcester: 1990-2005



Rate = infant deaths per 1,000 live births

* Statistically higher than state (p ≤ .05)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Infant Mortality Rates by Race and Ethnicity Worcester: 1990-2005

	White non-Hispanic	Black non-Hispanic	Hispanic	Worcester (all races)
1990	6.7	--	11.3	7.7
1991	5.8	28.4	18.8	9.5
1992	5.4	27.5	--	7.4
1993	9.4	--	8.8	6.2
1994	14.3	--	--	12.1
1995	6.8	--	11.6	8.8
1996	10.6	--	--	9.8
1997	8.6	--	--	8.2
1998	4.4	32.0	--	7.0
1999	6.5	20.4	9.8	8.1
2000	6.6	31.5	--	9.9
2001	5.3	29.5	--	8.2
2002	6.9	19.5	10.3	8.8
2003	--	17.4	--	4.3
2004	--	21.9	10.3	6.6
2005	11.1	15.7	24.2	13.9

Rate = infant deaths per 1,000 live births.

-- Calculations based on less than 5 events are excluded.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Highest IMR – 3 Year Averages Among the 30 Largest Communities¹ Massachusetts: 2003-2005

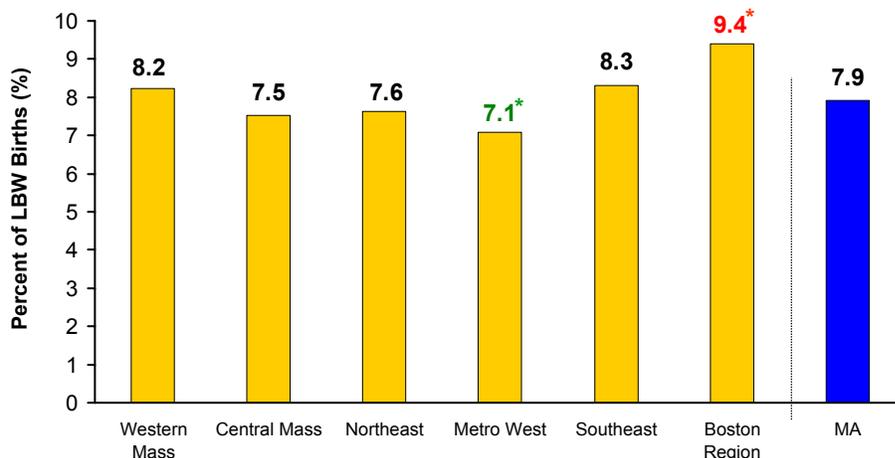
	<u>2003-2005 Rate</u>
Massachusetts	4.9 (n = 1,150)
Worcester	8.3 (n = 64) *
Lowell	7.8 (n = 39) *
Brockton	7.6 (n = 35)
Lawrence	7.5 (n = 32)
Weymouth	7.5 (n = 16)
Springfield	7.1 (n = 51)

* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

¹Selected among the 30 Massachusetts communities with the largest populations. Rate = infant deaths per 1,000 live births

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Low Birthweight by EOHHS Region Massachusetts: 2005

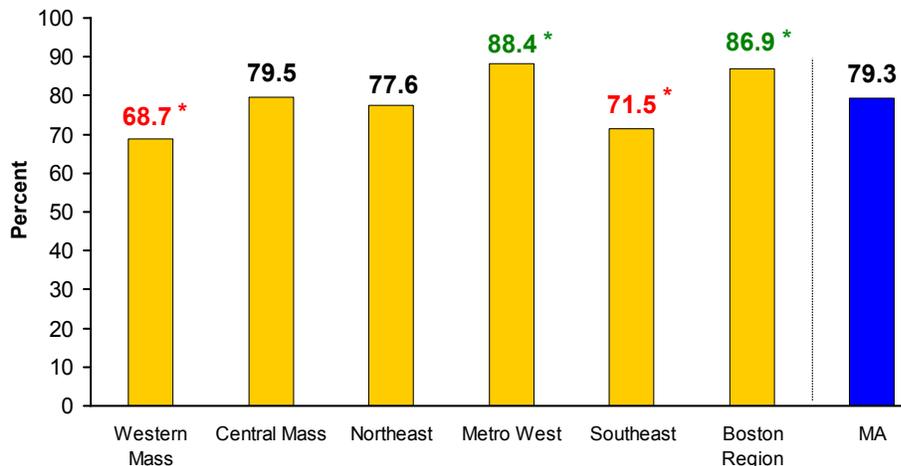


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Low birthweight: less than 2,500 grams or 5.5 pounds

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

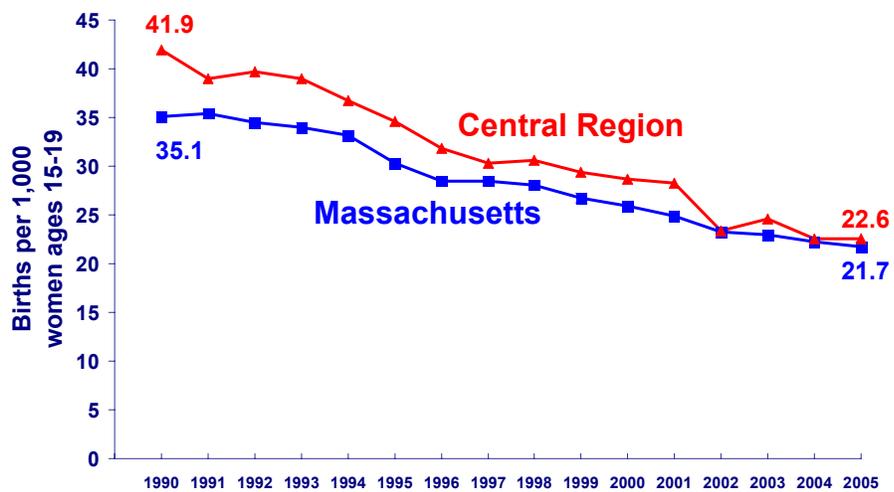
Breastfeeding by EOHHS Region Massachusetts: 2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

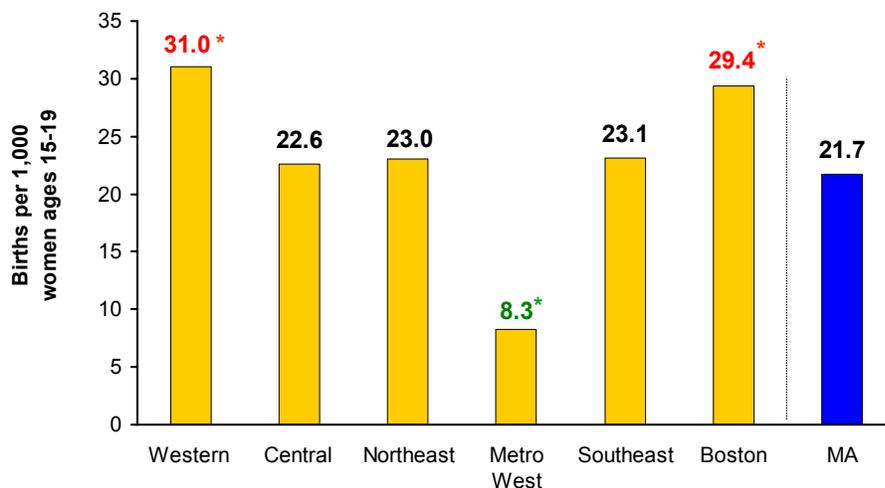
Teen Birth Rates Central Region and Massachusetts: 1990-2005



Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Teen Birth Rates¹ by EOHHS Regions Massachusetts: 2005

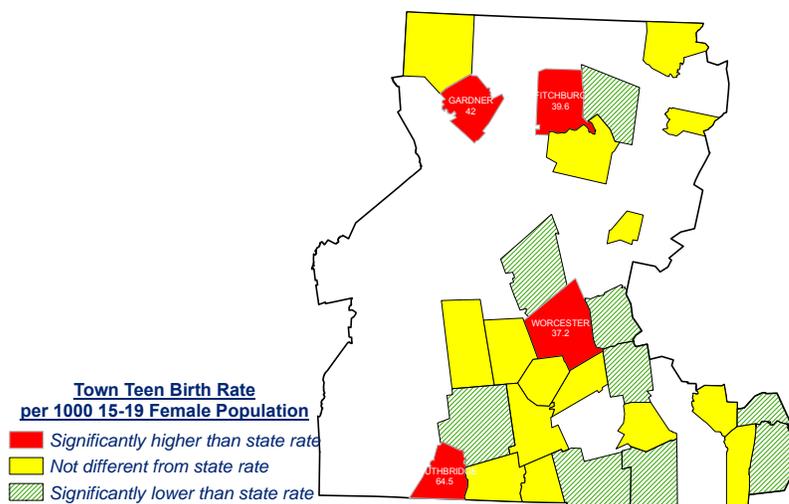


* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state

¹Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

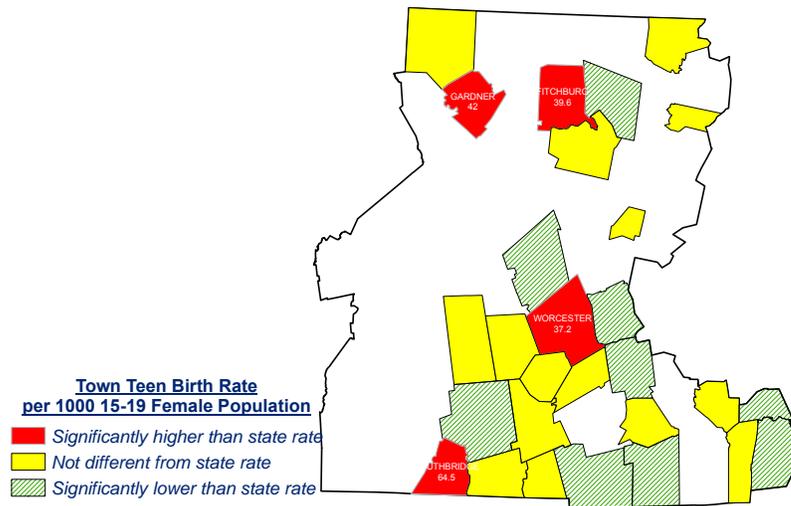
Teen Birth Rates by Community Central Region: 2005



*Towns with less than 100 births were excluded.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

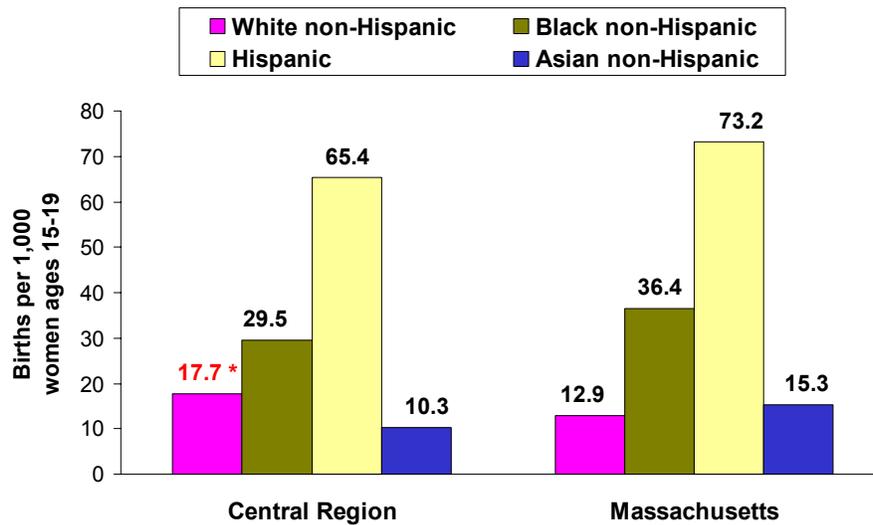
Teen Birth Rates by Community Central Region: 2005



*Towns with less than 100 births were excluded.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

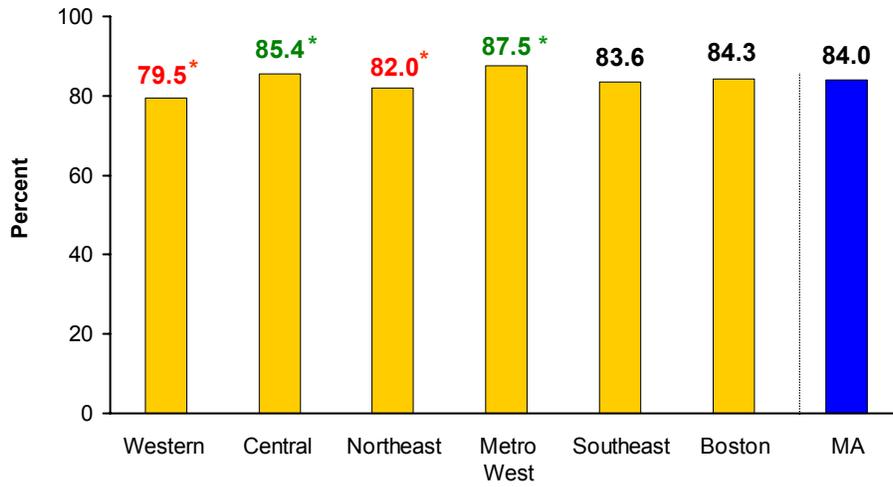
Teen Birth Rates by Race and Ethnicity Central Region and Massachusetts: 2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Adequate Prenatal Care by EOHHS Regions, Massachusetts: 2005

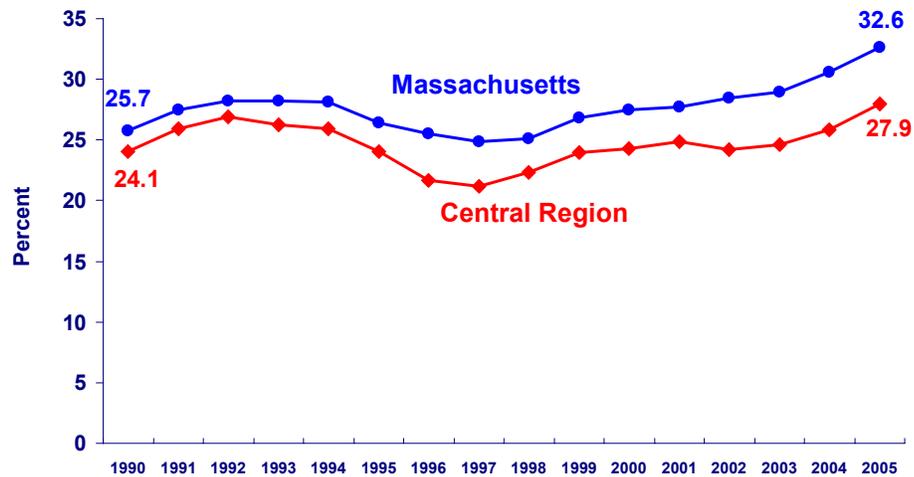


* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Based on Adequacy of Prenatal Care Utilization (APNCU) Index.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

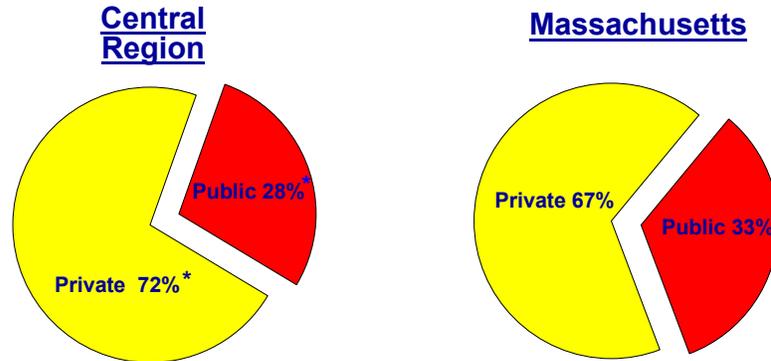
Public Source¹ of Payment for Prenatal Care Central Region and Massachusetts: 1990-2005



¹Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Public Source of Payment for Prenatal Care¹ Central Region and Massachusetts: 2005

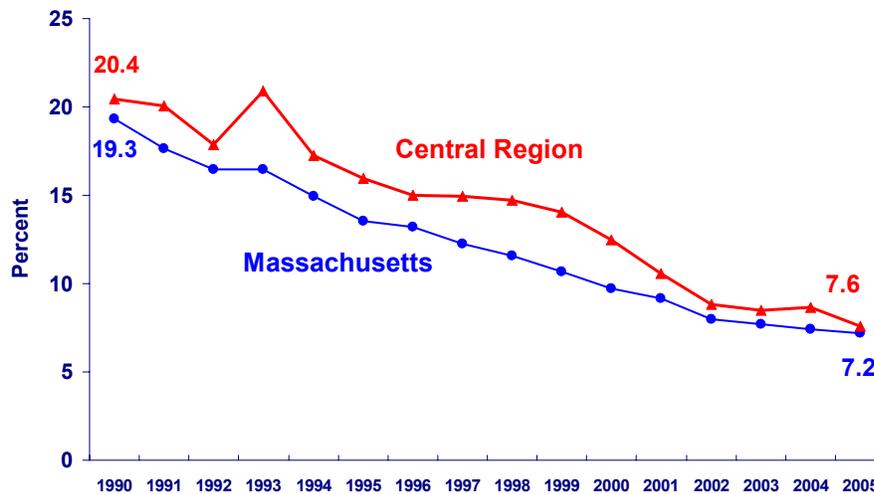


* Statistically Significantly different from state (p ≤.05)

¹Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.

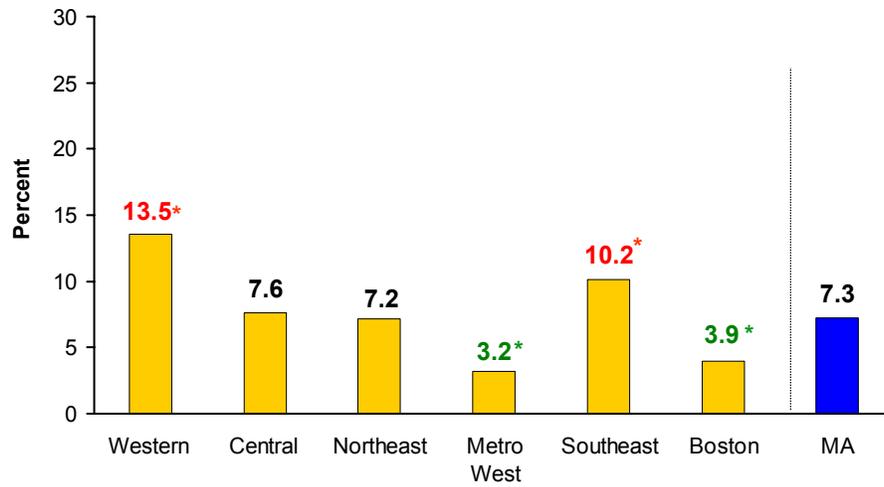
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Cigarette Smoking During Pregnancy Central Region and Massachusetts: 1990-2005



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Cigarette Smoking During Pregnancy by EOHHS Regions Massachusetts: 2005



* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

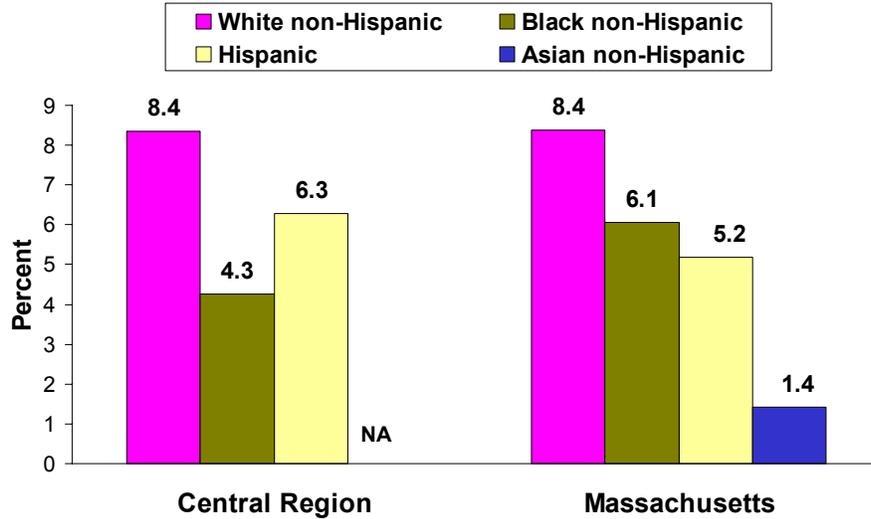
Cigarette Smoking During Pregnancy for Largest Communities Central Region: 2005

	<u>%</u>	<u>Smokers</u>	<u>Births</u>
Massachusetts	7.2%	5,555	76,653
Central Region	7.6%	797	10,512
Lowest			
Shrewsbury	1.6%*	7	429
Grafton	2.7%*	7	260
Holden	3.5%*	6	171
Highest			
Gardner	22.9%*	54	236
Southbridge	14.2%*	34	240
Fitchburg	12.8%*	73	571

* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Cigarette Smoking During Pregnancy by Race and Ethnicity Central Region and Massachusetts: 2005

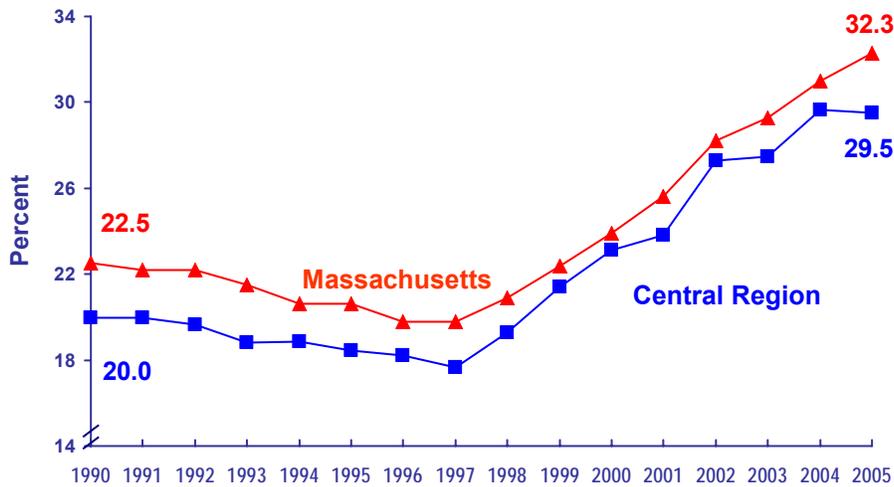
34



* Statistically Significant different from state ($p \leq .05$) - Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

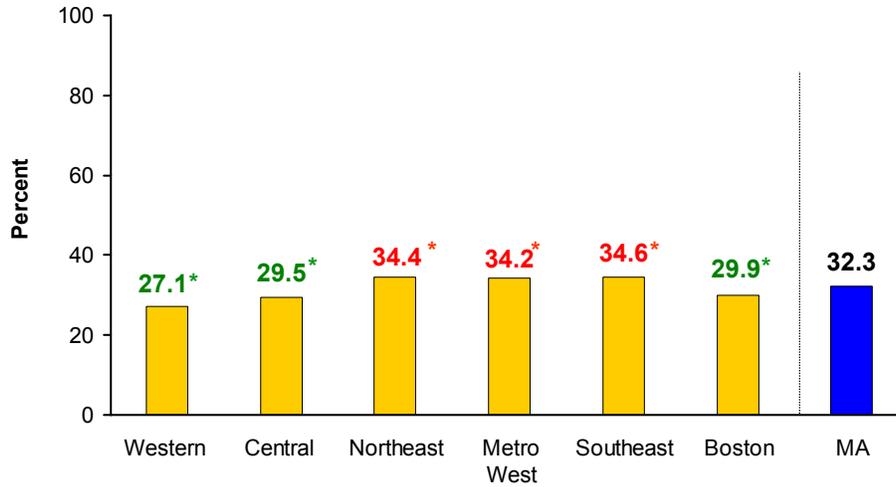
Infants Delivered by Caesarean Central Region and Massachusetts: 1990-2005

35



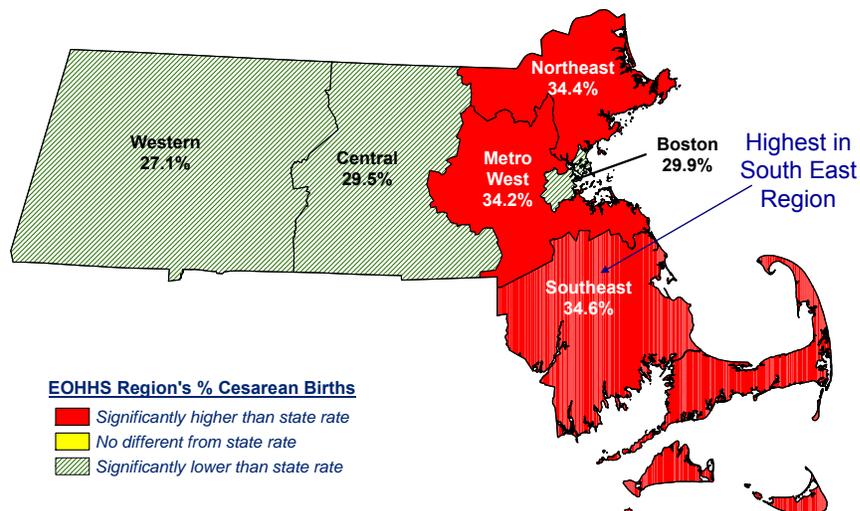
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Infants Delivered by Caesarean by EOHHS Regions, Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$) - Red: Statistically worse than state - green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Percentage of Cesarean Births by Executive Office of Health and Human Service (EOHHS) Regions, Massachusetts Births 2005



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Summary of Birth Indicators by EOHHS Regions, Massachusetts:2005

Indicator (as % of race group births)	MA Total (n=76,824)	Western (n=8,935)	Central (n=10,532)	North East (n=15,939)	Metro West (n=17,093)	South East (n=14,681)	Boston (n=9,644)
Adequate Prenatal Care (Kotelchuck index)	84.0	79.5	85.4	82.0	87.5	83.6	84.3
C-section deliveries	32.3	27.1	29.5	34.4	34.2	34.6	29.9
Low Birth weight (<5.5 lb)	7.9	8.2	7.5	7.6	7.1	8.3	9.4
Breastfeeding	79.3	68.7	79.5	77.6	88.4	71.5	86.9
Public Pay for Prenatal Care	32.6	47.4	27.9	33.7	17.2	34.7	46.4
Smoking during pregnancy	7.1	13.5	7.6	7.2	3.2	10.2	3.9

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Summary of Birth Indicators by EOHHS Regions, Massachusetts:2002-2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Infant Mortality Rate (infant deaths per 1000 live births)	4.9	5.6	5.4	4.7	4.0	4.8	5.7
Teen birth rate (births to women ages 15-19 per 1000 women ages 15-19)	21.7	31.0	22.9	23.0	8.3	23.1	29.4

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

LEADING CAUSES OF DEATH

Leading Causes of Death Central Region and Massachusetts:2005

Central Region N=6,954			Massachusetts N=53,776		
Heart Disease	1,753	25.2%	Heart Disease	13,248	24.6%
Cancer	1,644	23.6%	Cancer	13,159	24.5%
Stroke	405	5.8%	Stroke	2,979	5.5%
Chronic Lower Respiratory Disease (formerly COPD)	399	5.7%*	All Injuries	2,657	4.9%
All Injuries	329	4.7%	Chronic Lower Respiratory Disease (formerly COPD)	2,643	4.9%
Influenza and pneumonia	263	3.8%	Influenza and pneumonia	1,932	3.6%
Alzheimer's	204	2.9%	Alzheimer's	1,635	3.0%
Diabetes	185	2.7%	Nephritis	1,403	2.6%
Nephritis	148	2.1%**	Diabetes	1,271	2.4%
Septicemia	108	1.6%	Septicemia	982	1.8%

* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

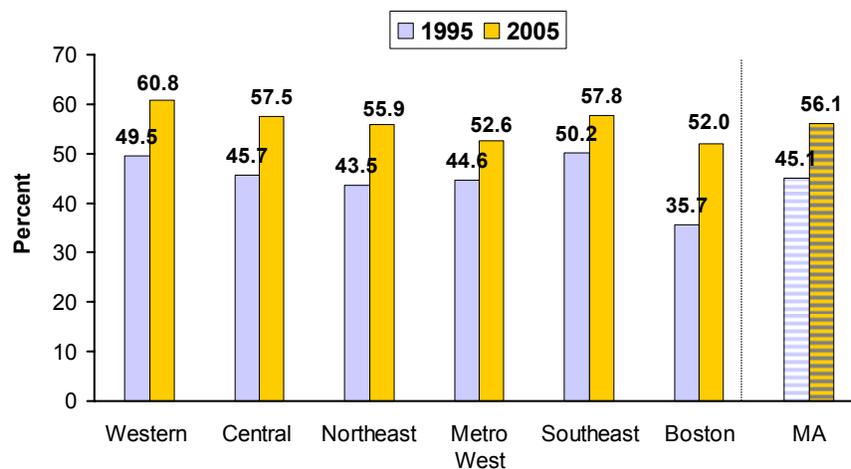
CHRONIC DISEASE OUTCOMES AND OVERWEIGHT/OBESITY

Example: Overweight and Obese by Height

<u>Height</u>	<u>Overweight</u> BMI 25.0-29.9	<u>Obesity</u> BMI > 30
5'	128 lbs.	153 lbs.
5'2"	136	164
5'4"	145	174
5'6"	155	186
5'8"	164	197
6'	184	221
6'2"	195	234

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Adults who are Overweight¹ by EOHS Region, Massachusetts: 1995 & 2005

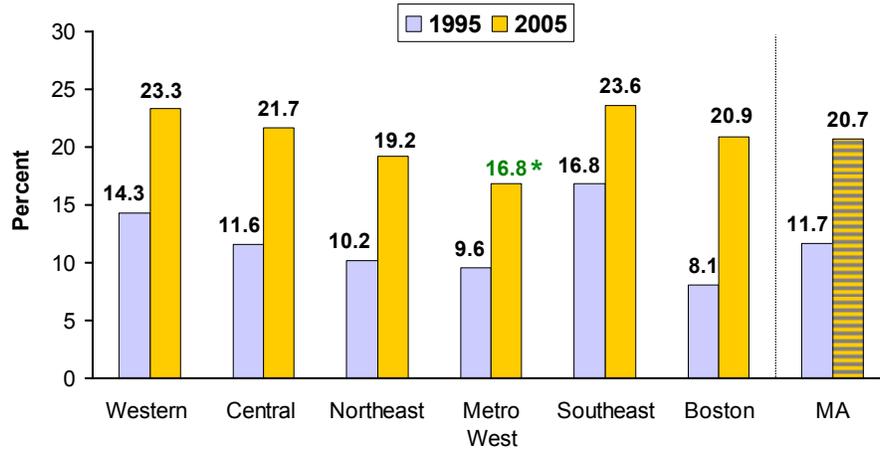


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

¹ Overweight: BMI greater than or equal to 25

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

Adults who are Obese¹ by EOHHS Region, Massachusetts: 1995 & 2005

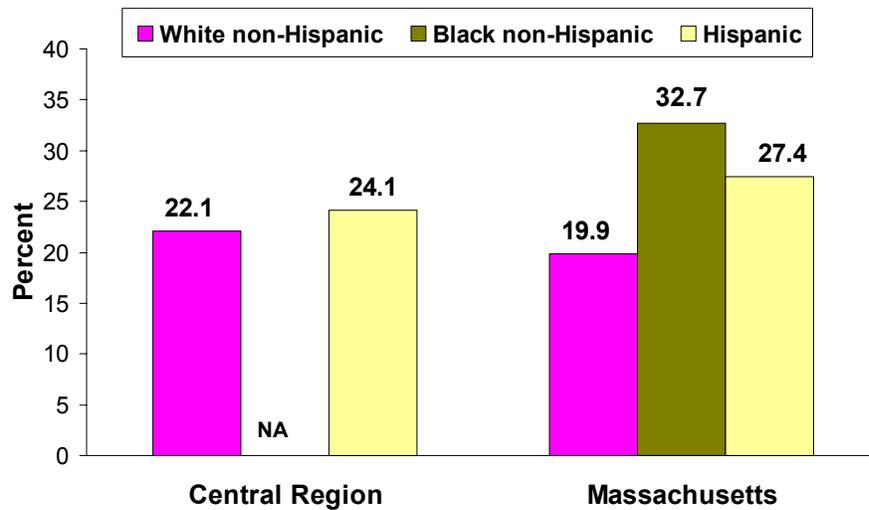


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

¹ Obesity: BMI greater than or equal to 30

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

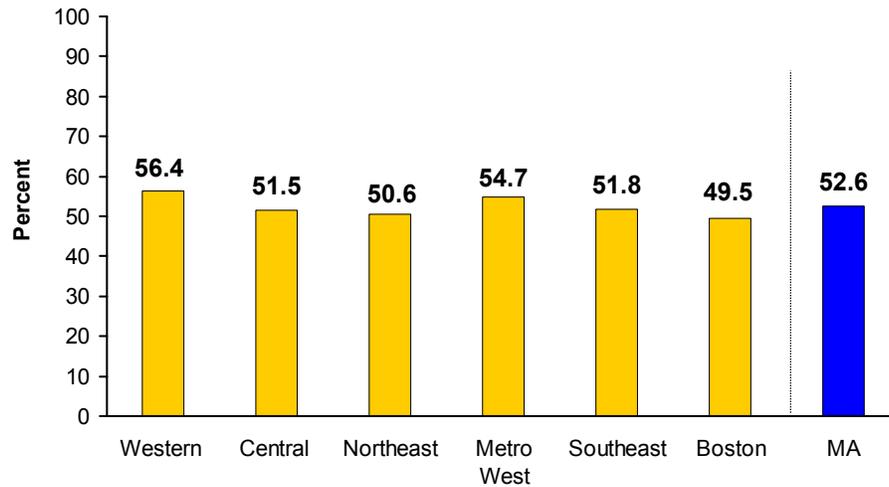
Obesity by Race and Ethnicity Central Region and Massachusetts: 2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

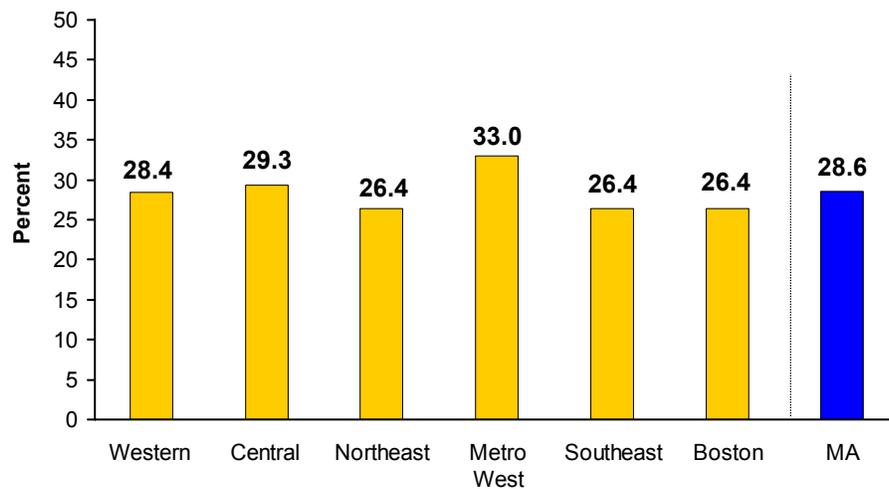
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Participate in Regular Physical Activity by EOHHS Region, Massachusetts: 2005



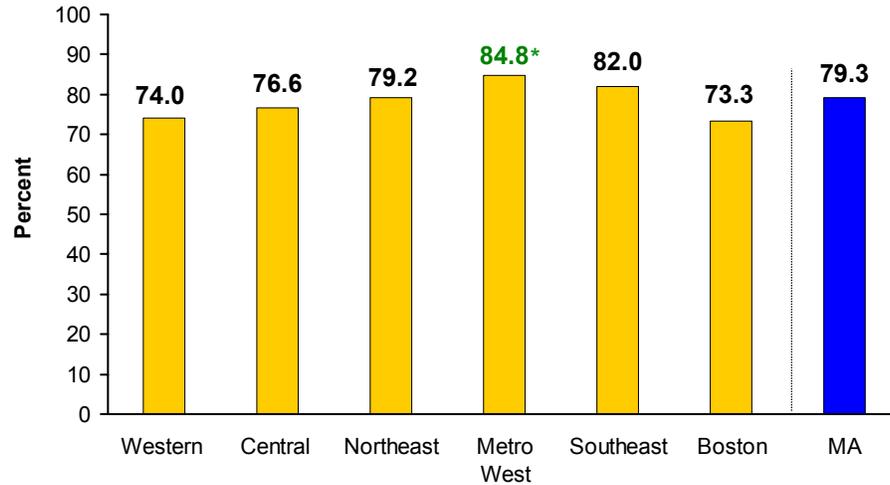
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who have 5+ Servings of Fruit or Vegetables by EOHHS Region, Massachusetts: 2005



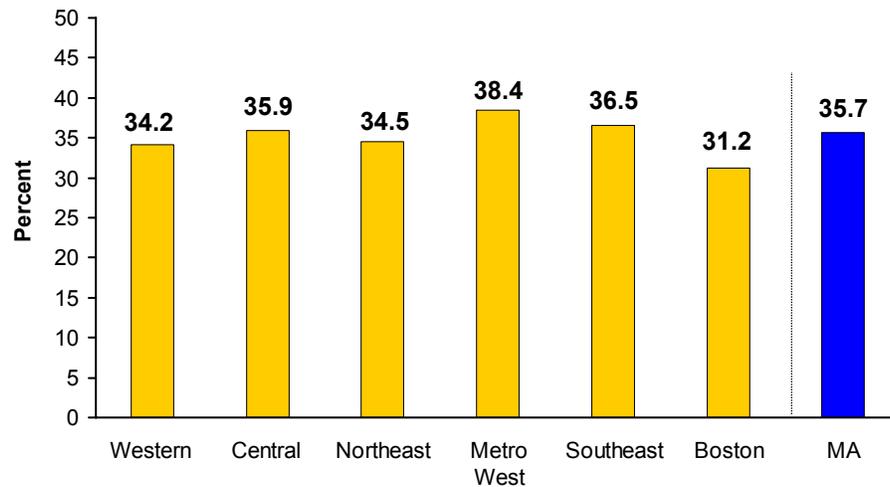
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who had their cholesterol checked in Past 5 Years by EOHHS Region Massachusetts: 2005



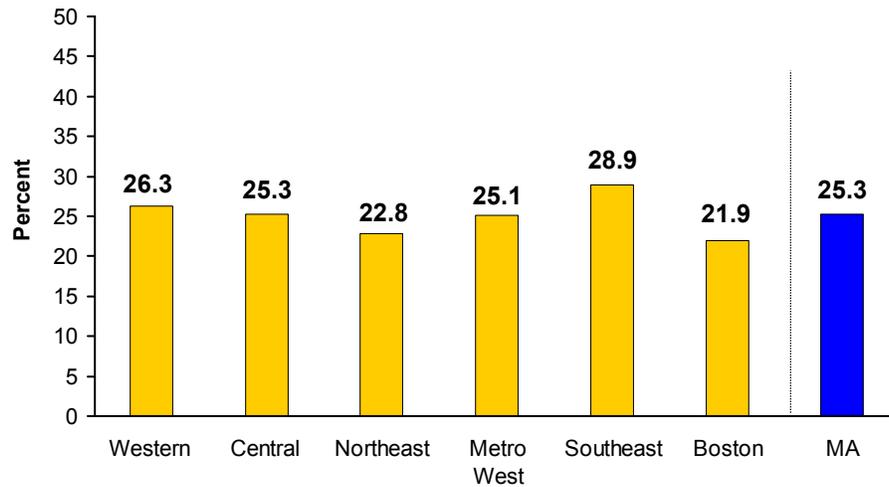
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who were told by a health care provider that they have high cholesterol¹ by EOHHS Region Massachusetts: 2005



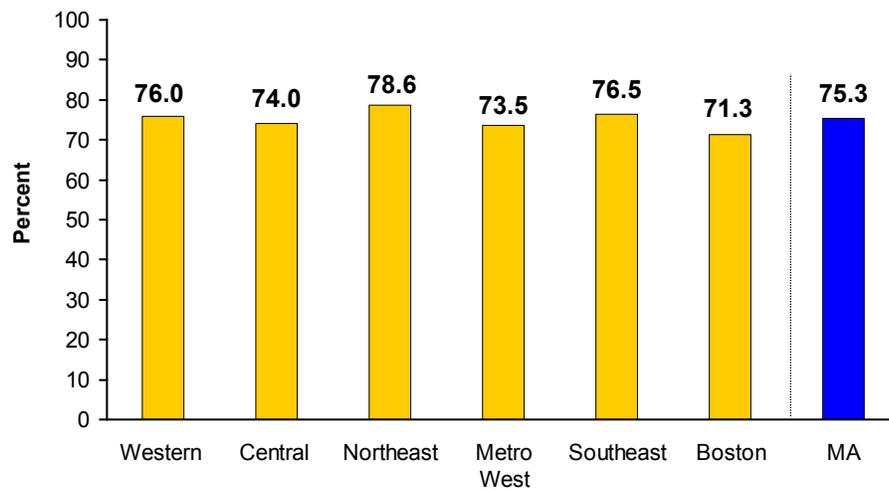
* Statistically Significant different from state (p ≤.05) ¹ Among those who reported having their cholesterol checked
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who were told by a health care provider that they have high blood pressure by EOHHS Region Massachusetts: 2005



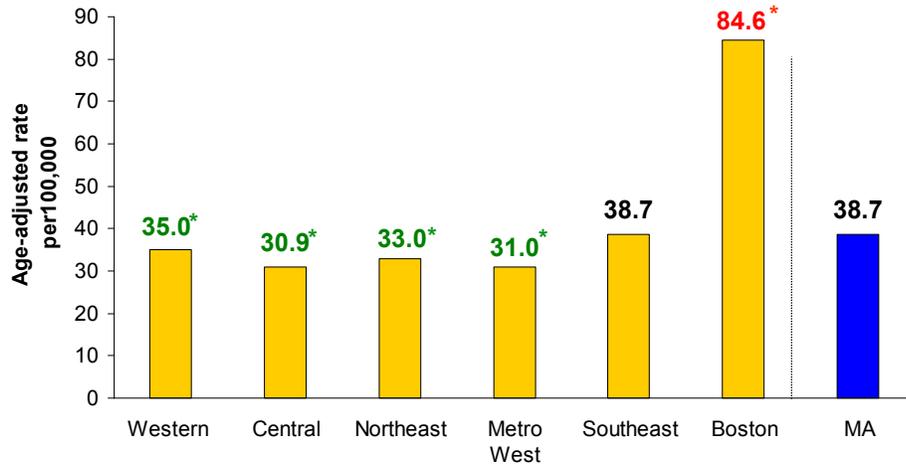
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who take Medicine for High Blood Pressure¹ by EOHHS Region Massachusetts: 2005



* Statistically Significant different from state (p ≤.05) ¹ Among those who reported having high blood pressure
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Hypertension Hospital Discharges by EOHHS Region, Massachusetts: 2003-2005

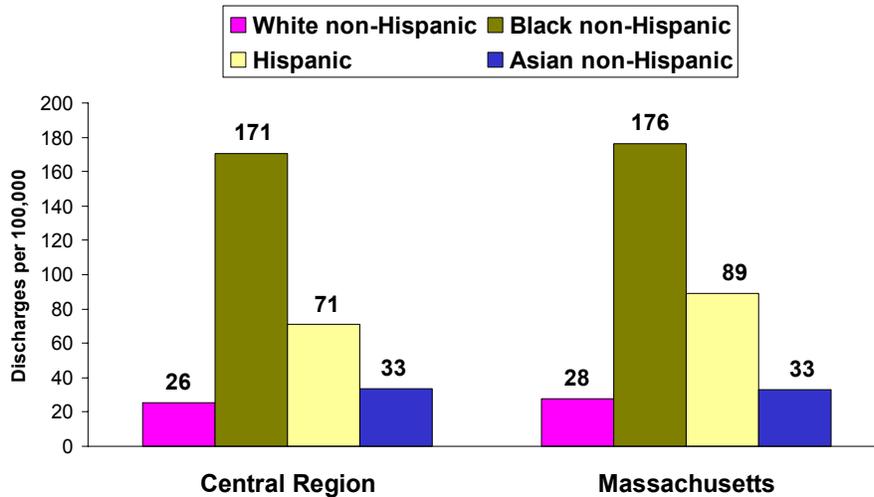


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

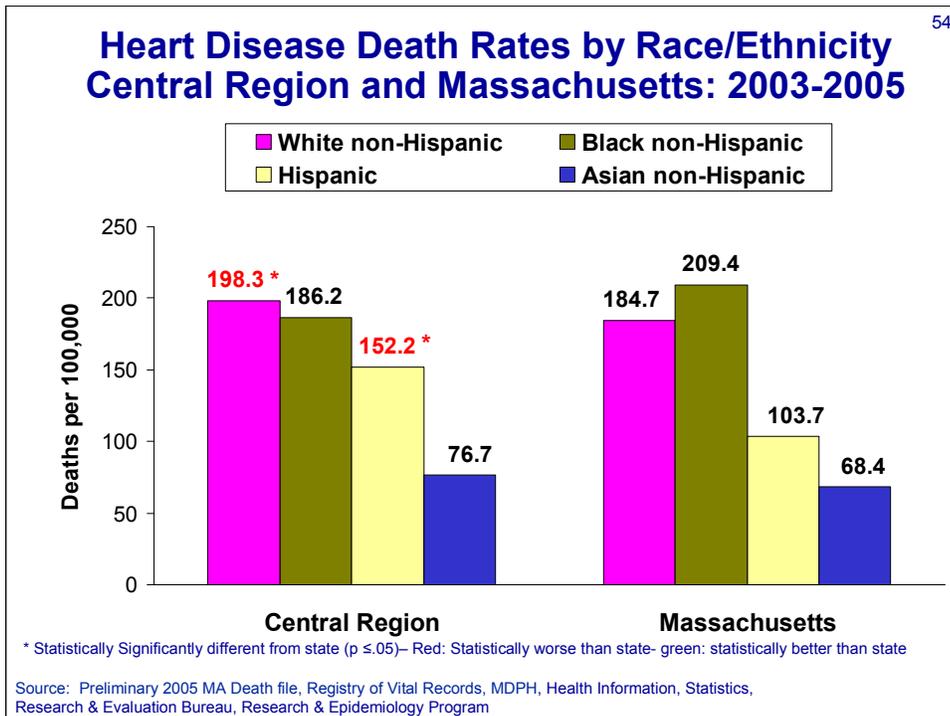
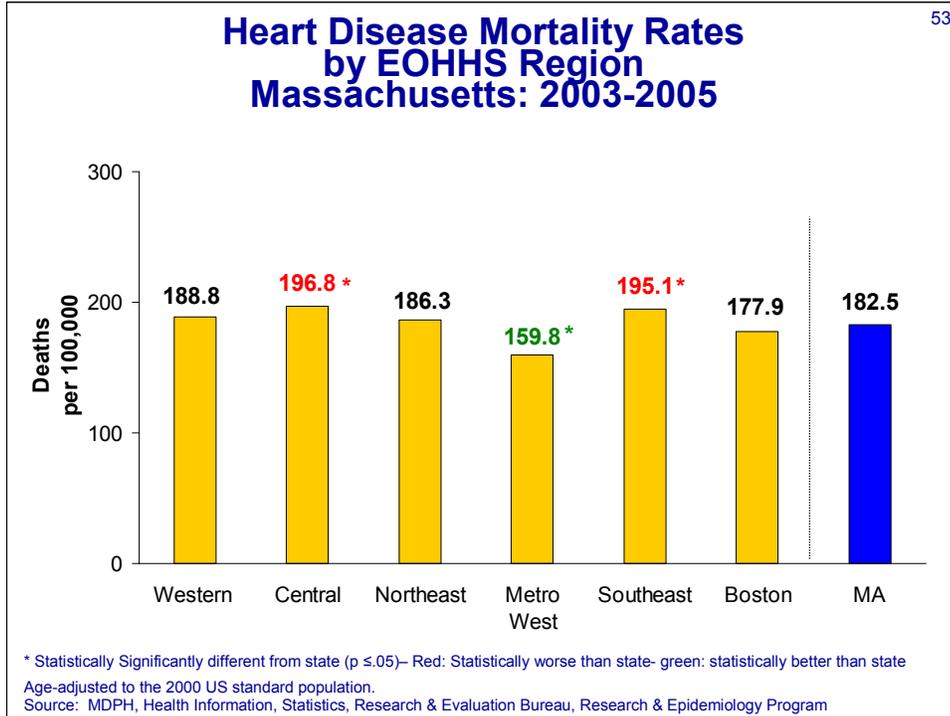
Hypertension Hospital Discharge Rates by Race/Ethnicity Central Region Massachusetts: 2003-2005



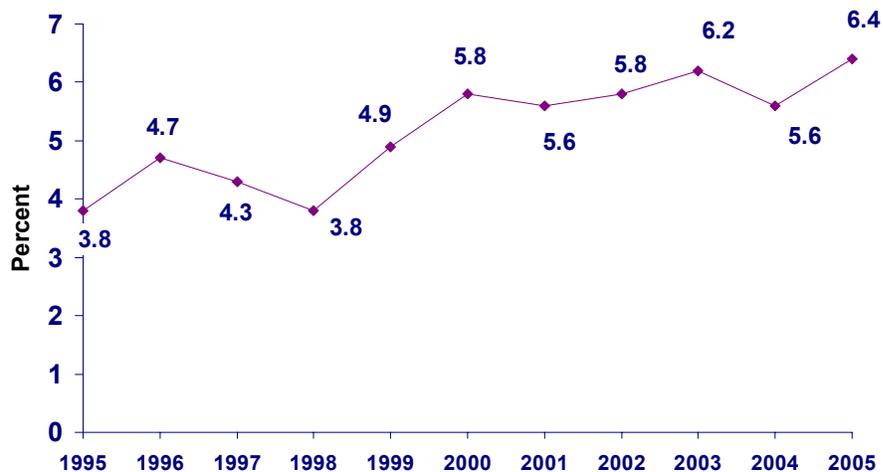
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

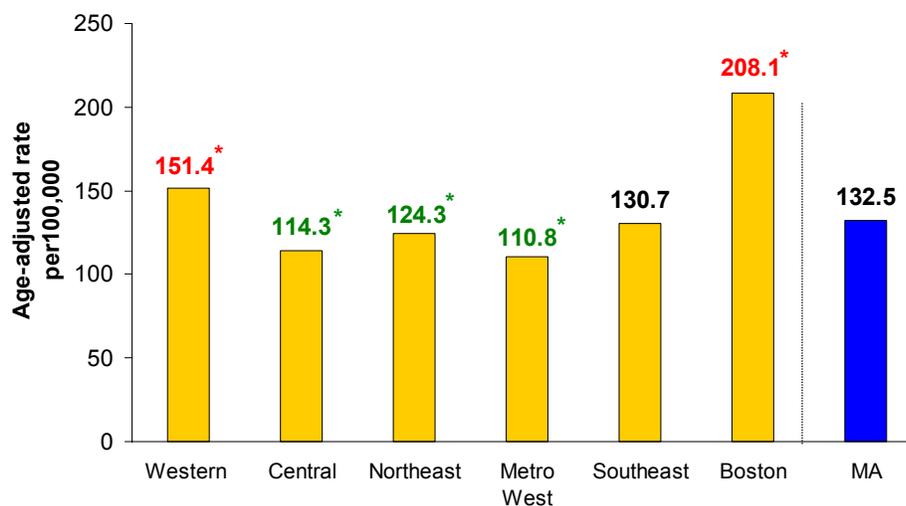


Prevalence of Diabetes Massachusetts: 1994-2005



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

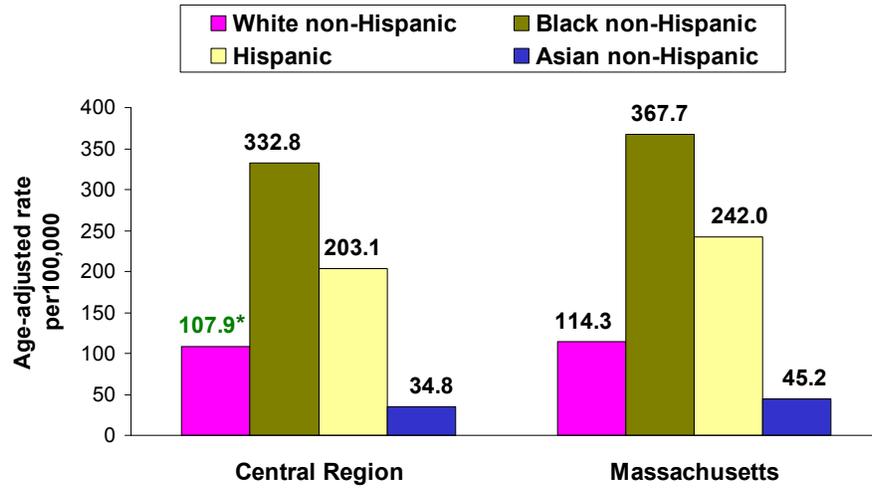
Diabetes Hospital Discharge Rates by EOHHS Region, Massachusetts: 2003-2005



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.

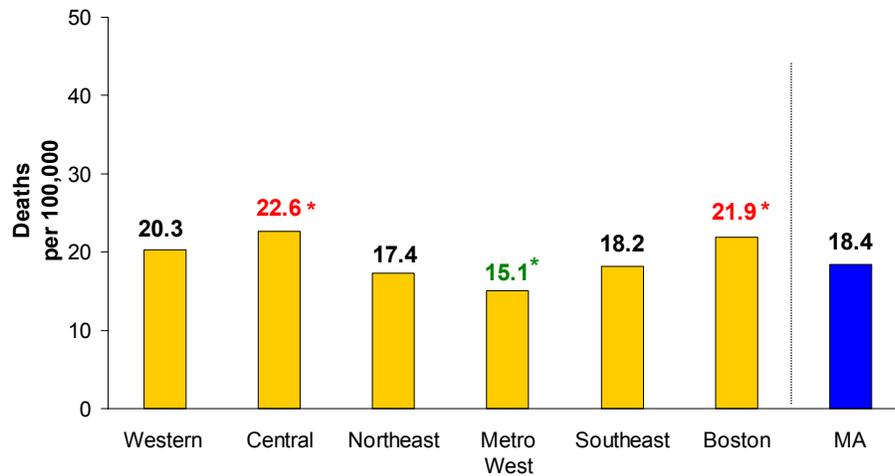
Source: Division of Health Care Finance and Policy, Calendar Year 2003-2005, Inpatient Hospital Discharge Database

Diabetes Hospital Discharge Rates by Race/Ethnicity Central Region Massachusetts: 2003-2005



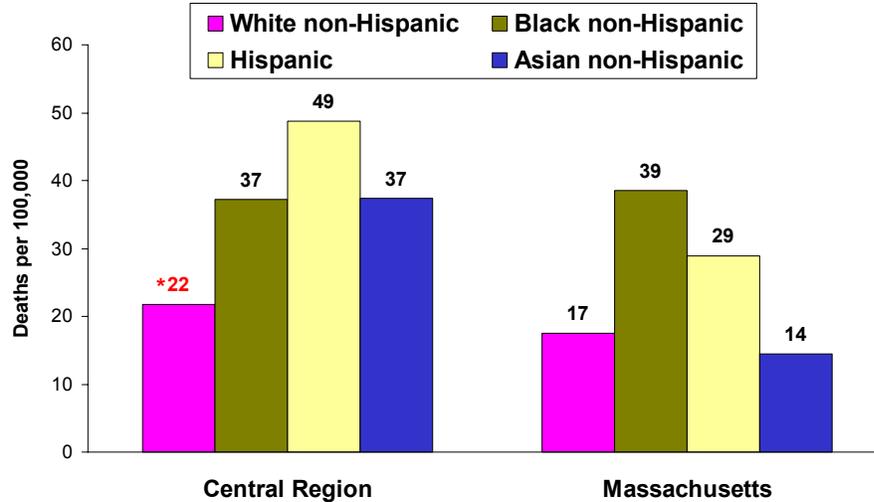
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Diabetes Mortality Rates by EOHHS Region Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Diabetes Mortality Rates by Race/Ethnicity Central Region and Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Summary Indicators for Overweight/Obesity by EOHHS Regions, Massachusetts:2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Obese Adults	20.7	23.3	21.7	19.2	16.8	23.6	20.9
% Adults Participation in regular PA	52.6	56.4	51.5	50.6	54.7	51.8	49.5
% Adults with 5+ servings fruits/vegetables	28.6	28.4	29.3	26.4	33.0	26.4	26.4
% Adults who had cholesterol checked	79.3	74.0	76.6	79.2	84.8	82.0	73.3
% Adults with high cholesterol	35.7	34.2	35.9	34.5	38.4	36.5	31.2

Green: Better Outcome (significantly different from state) Red: Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Summary Indicators for Chronic Disease Outcomes for Overweight/Obesity by EOHHS Regions

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Adults with HBP	25.3	26.3	25.3	22.8	25.1	28.9	21.9
% Adults take HBP medications	75.3	76.0	74.0	78.6	73.5	76.5	71.3
Hypertension Hospital Discharges (2003-2005)	38.7	35.0	30.9	32.9	31.0	38.7	84.6
Heart Disease Death Rate (2003-2005)	182.5	188.8	196.8	186.3	159.8	195.1	177.9
Diabetes Hospital Discharges (2003-2005)	132.5	151.4	114.3	124.3	110.8	130.7	208.1
Diabetes Death Rate (2003-2005)	18.4	20.3	22.6	17.3	15.1	18.2	21.9



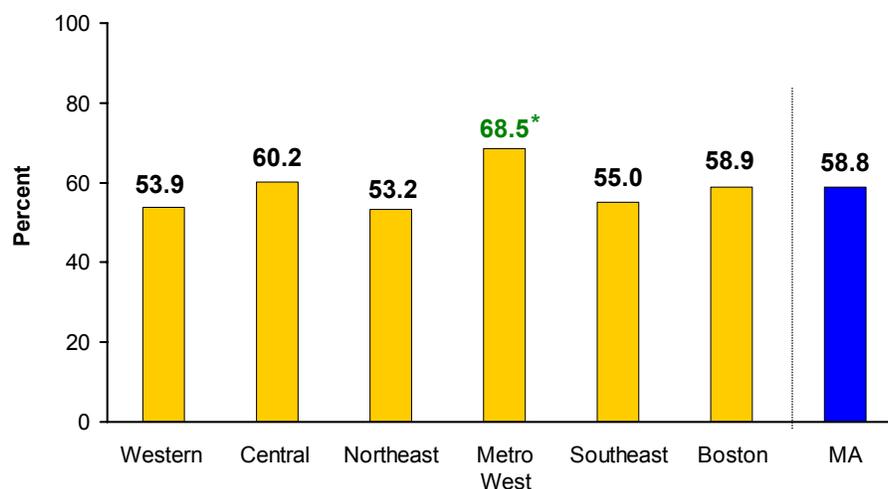
Better Outcome (significantly different from state)



Worse Outcome (significantly different from state)

CANCER

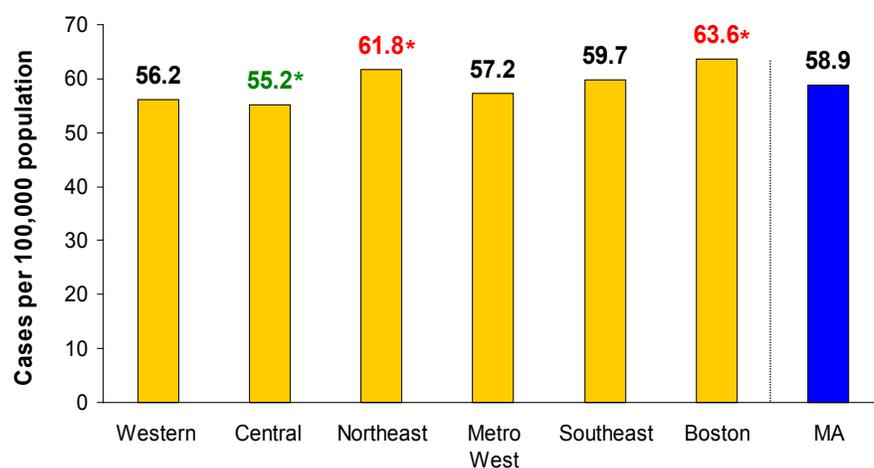
Adults Ages 50+ who have had a Sigmoidoscopy or Colonoscopy in Past 5 Years by EOHS Region Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Incidence Rates for Invasive Colorectal Cancer by EOHS Region, Massachusetts: 1999-2003

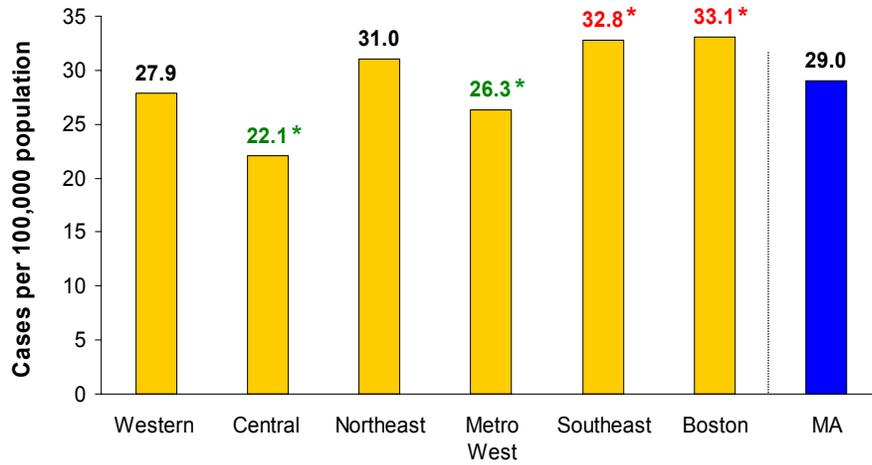


* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Colorectal Cancer MALES by EOHHS Region, Massachusetts: 1999-2003

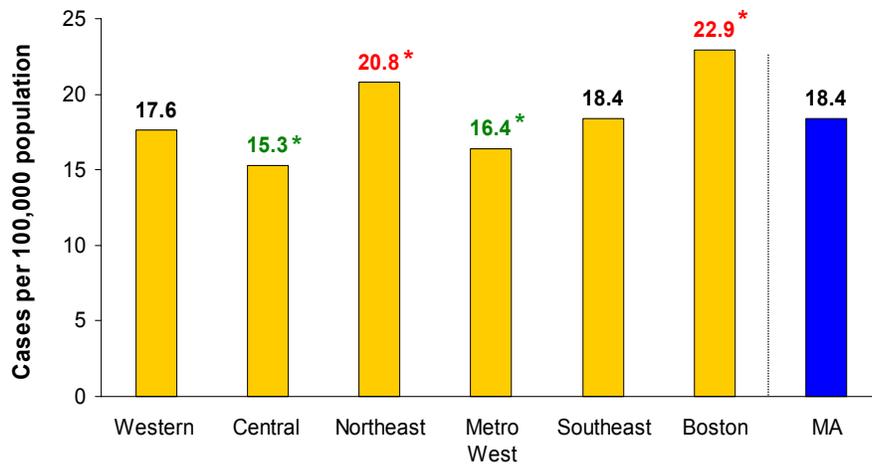


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

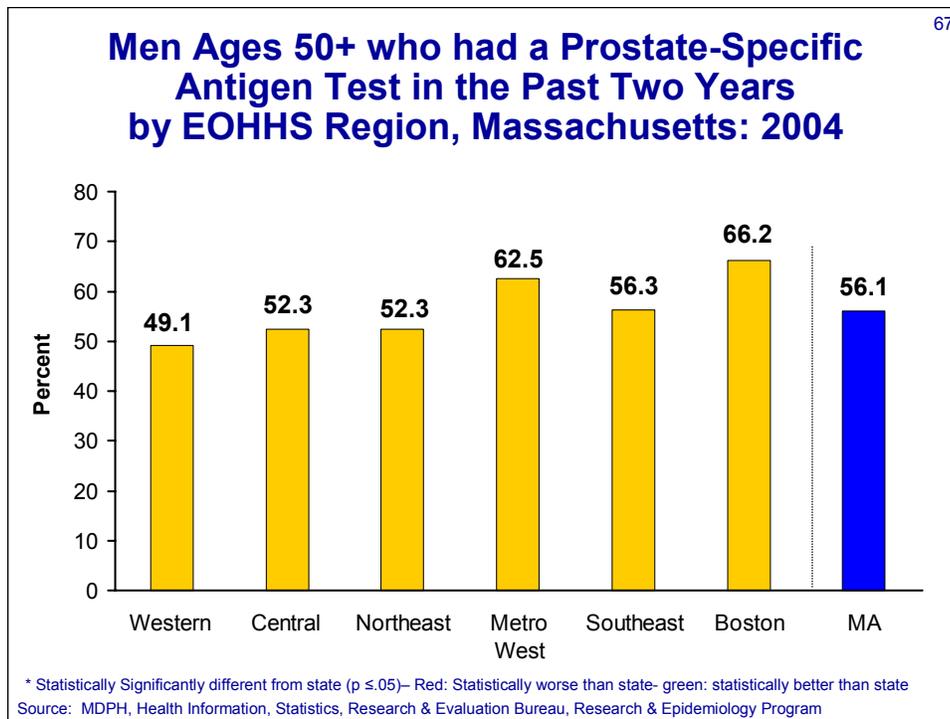
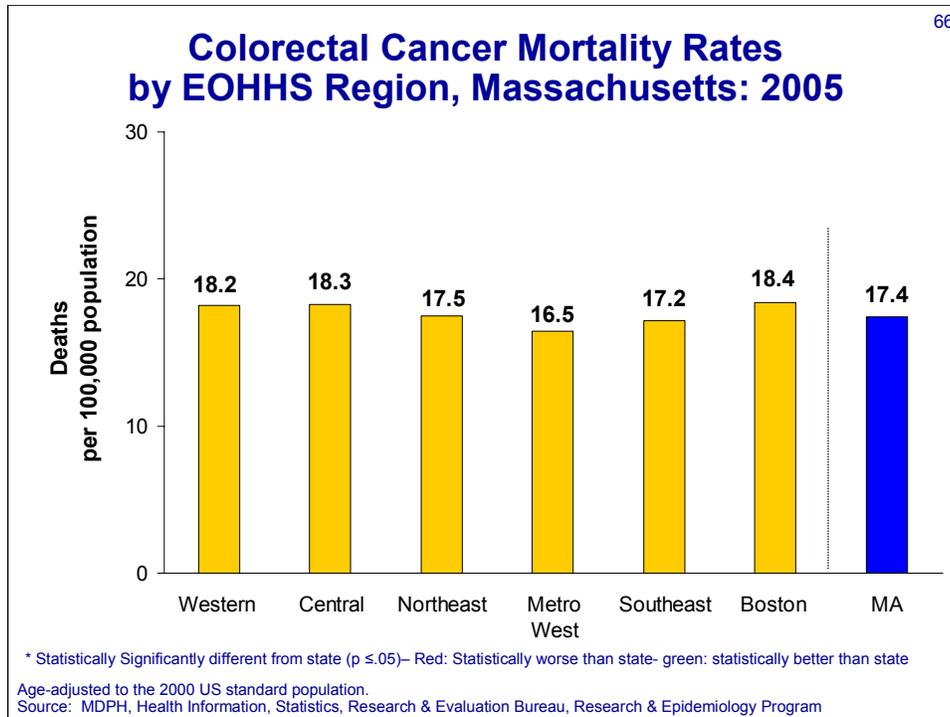
Incidence Rates for Early Stage Colorectal Cancer FEMALES by EOHHS Region, Massachusetts: 1999-2003

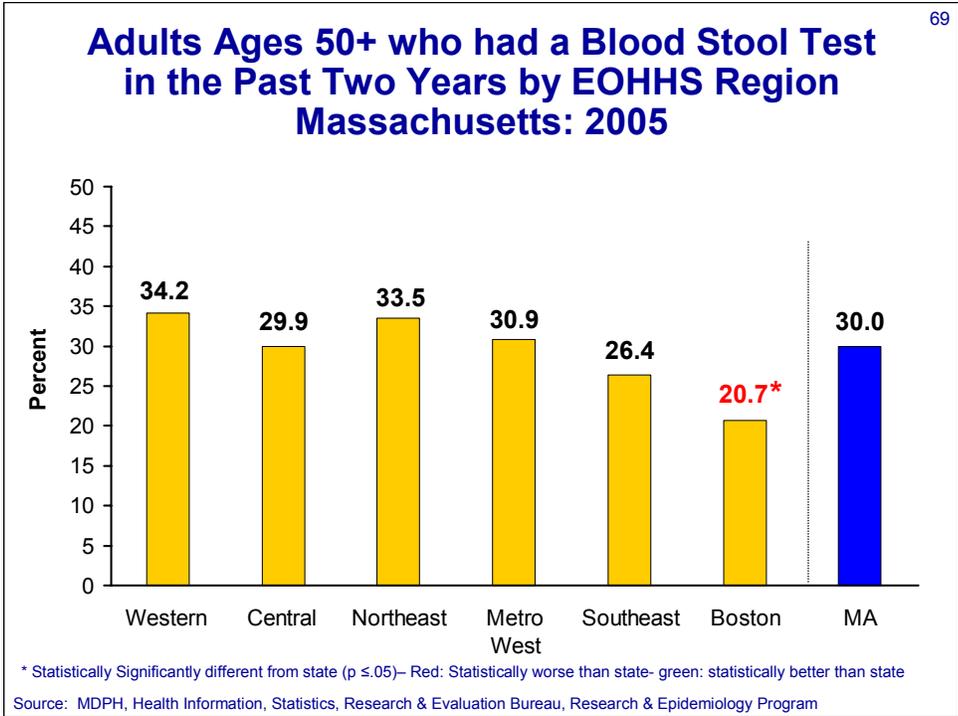
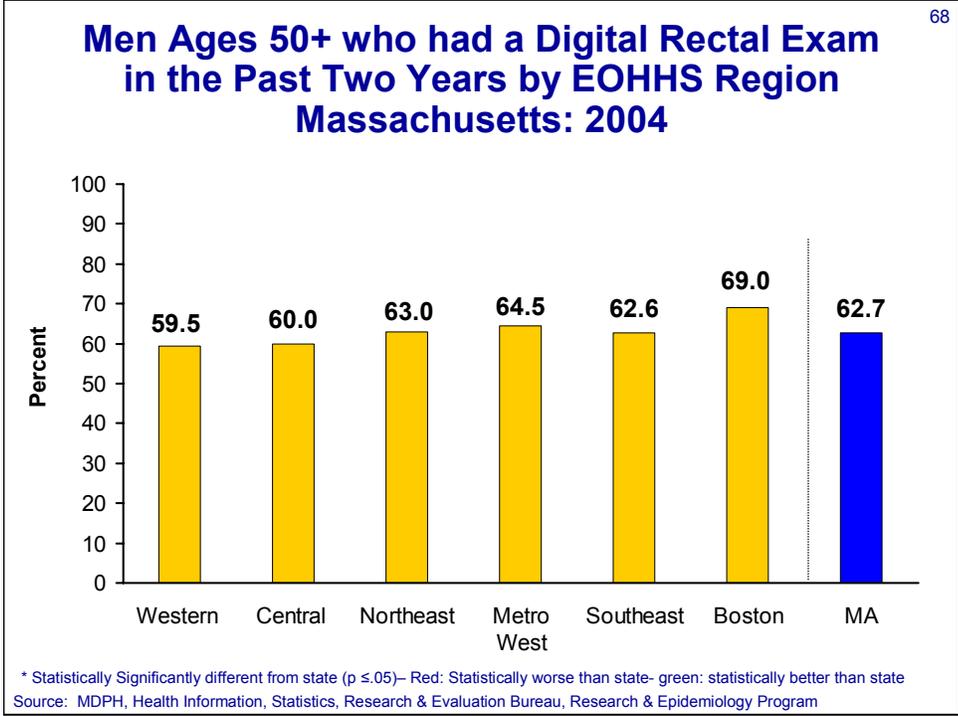


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

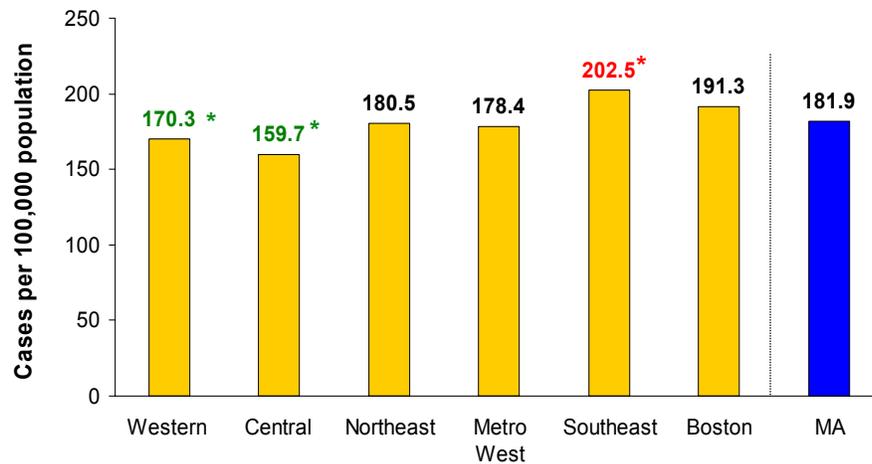
Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry





Incidence Rates for Invasive Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003

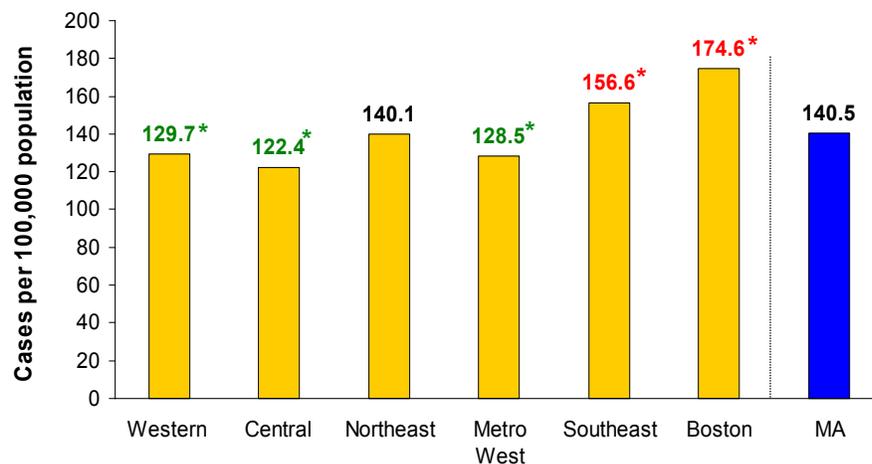


* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

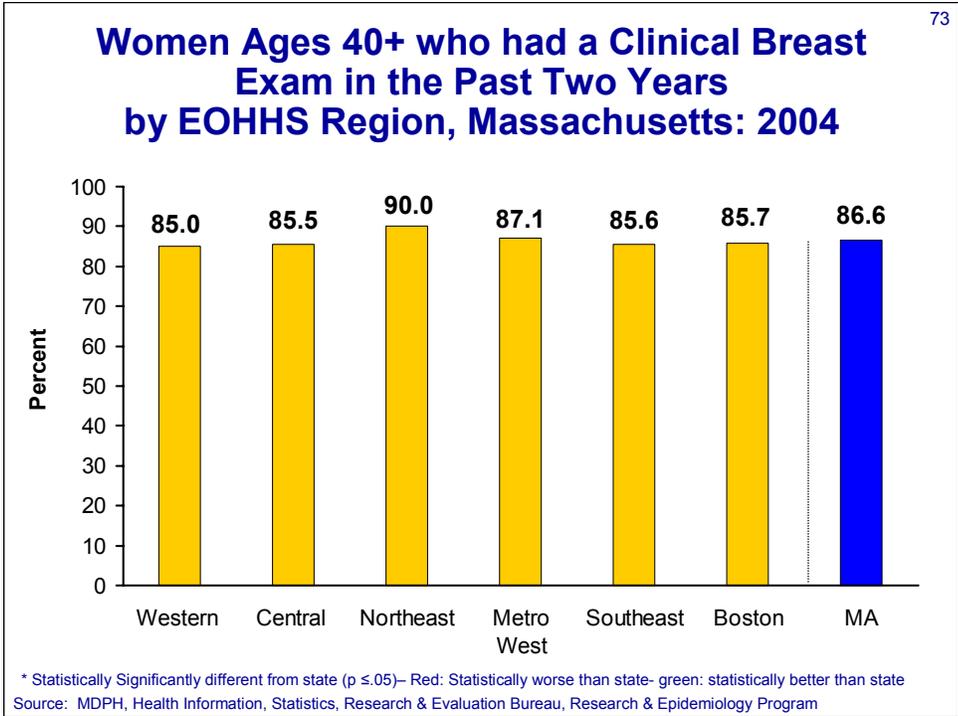
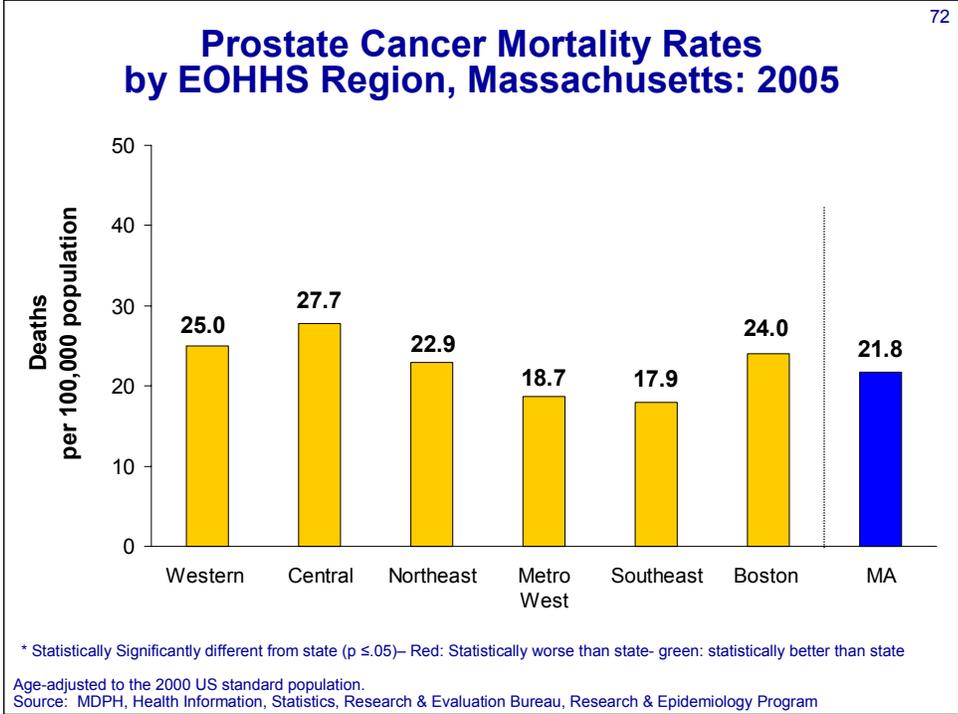
Incidence Rates for Early Stage Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state

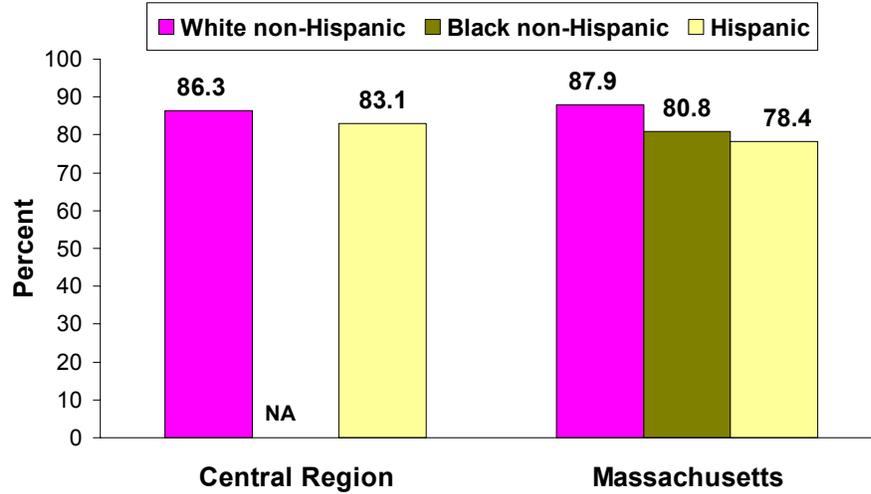
Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry



Women who had a Clinical Breast Exam in the Past Two Years by Race and Ethnicity Central Region and Massachusetts: 2004

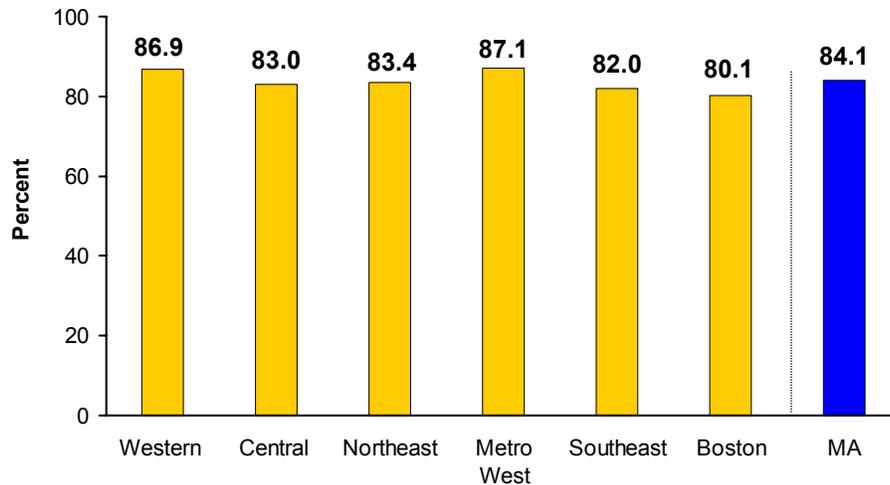
74



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

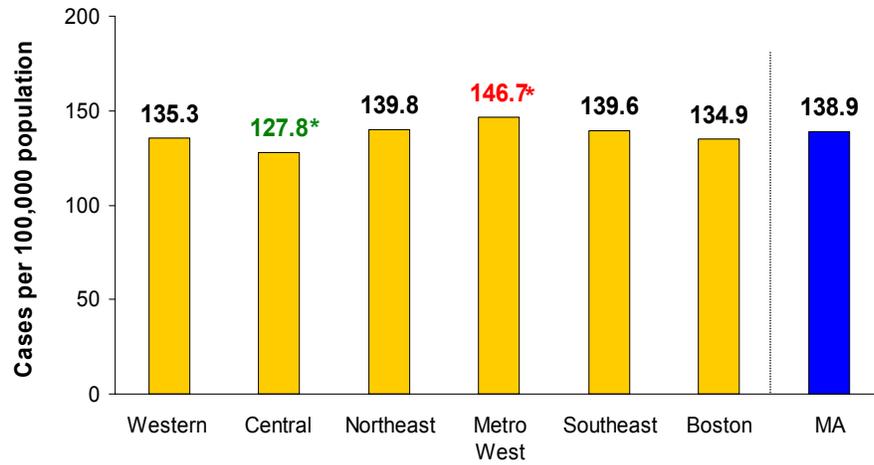
Women Ages 40+ who have had a mammography in Past 2 Years by EOHHS Region Massachusetts: 2005

75



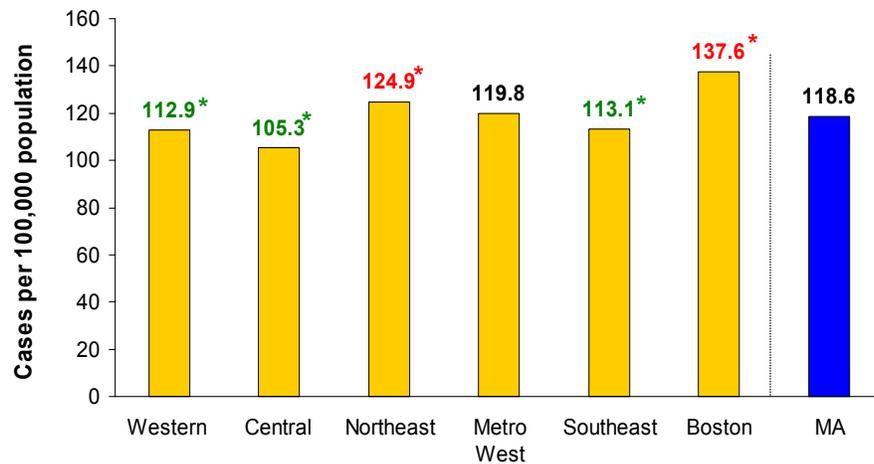
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Incidence Rates for Invasive Female Breast Cancer by EOHHS Region, Massachusetts: 1999-2003

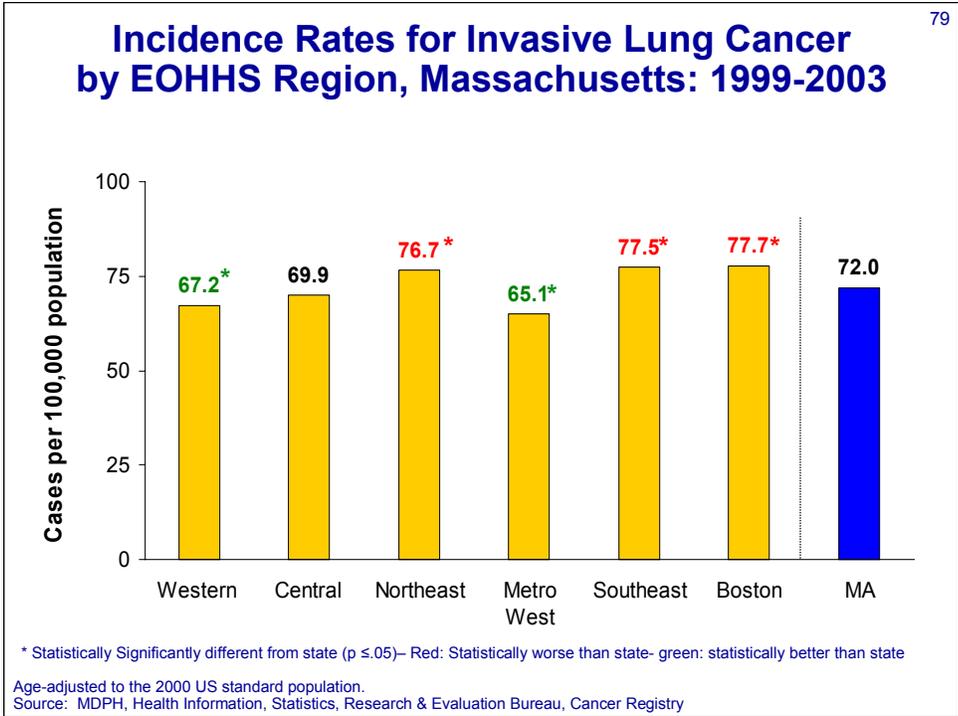
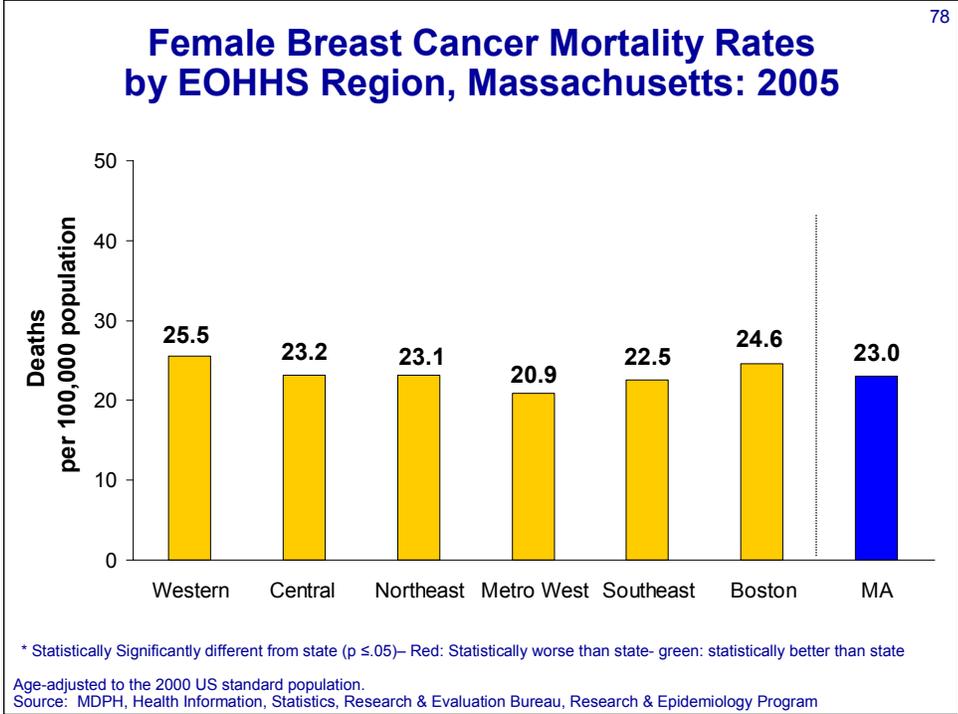


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Female Breast Cancer by EOHHS Region, Massachusetts: 1999-2003

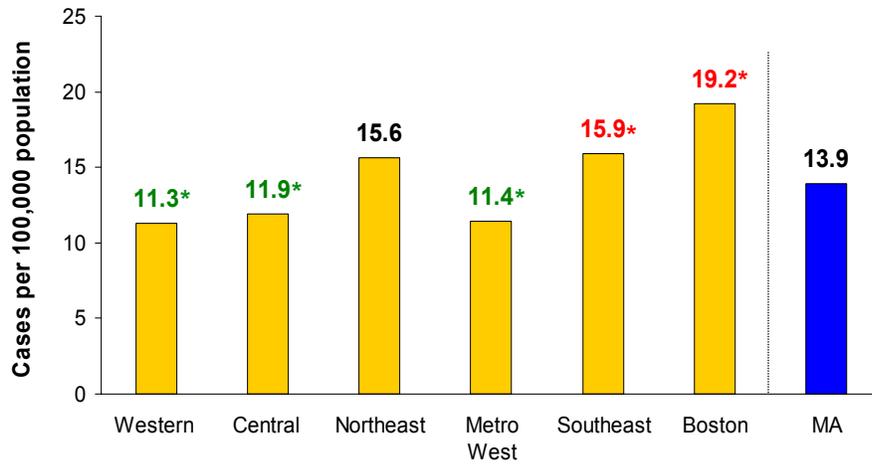


* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry



80

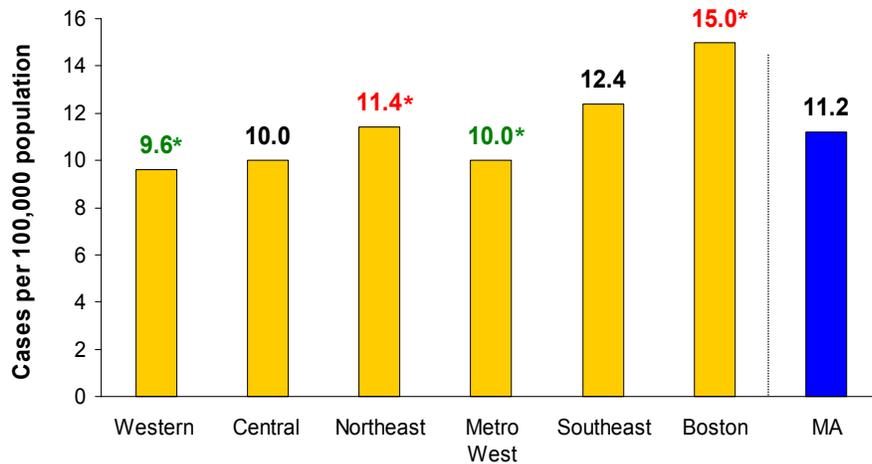
Incidence Rates for Early Stage Lung Cancer MALES by EOHHS Region, Massachusetts: 1999-2003



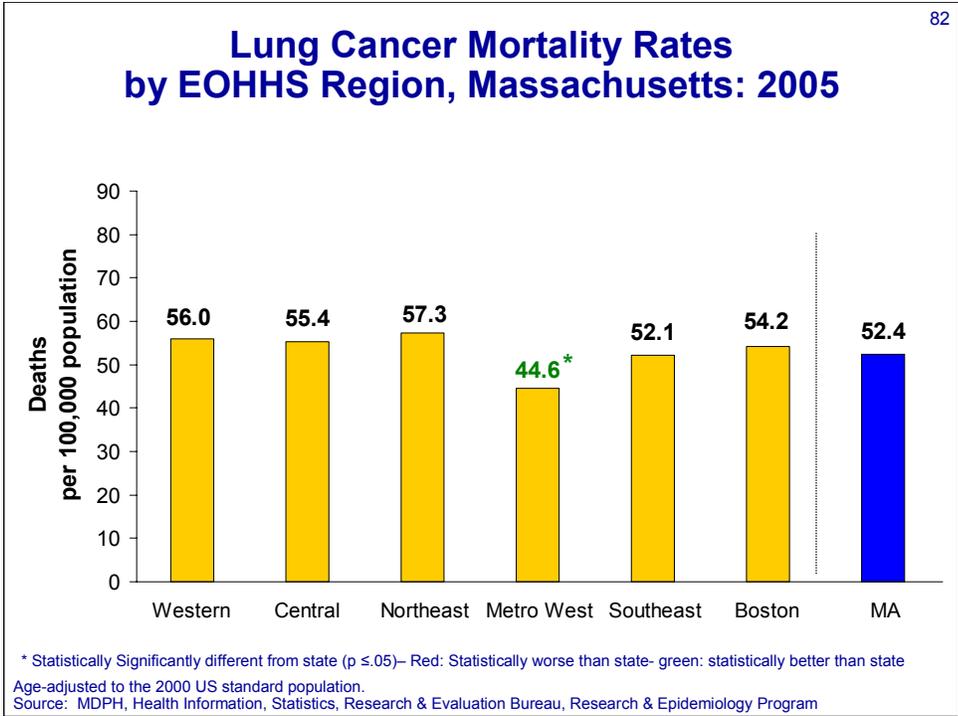
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

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Incidence Rates for Early Stage Lung Cancer FEMALES by EOHHS Region, Massachusetts: 1999-2003



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry



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Summary Indicators for Cancer Screening by EOHHS Regions, Massachusetts: 2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Men† PSA (2004)	56.1	49.1	52.3	52.3	62.5	56.3	66.2
% Men† DRE (2004)	62.7	59.5	60.0	63.0	64.5	62.6	69.0
% Blood Stool Test †	30.0	34.2	29.9	33.5	30.9	26.4	20.7
% Adults Sigmoidoscopy or Colonoscopy†	58.8	53.9	60.2	53.2	68.5	55	58.9
% Women Clinical Breast Exam (2004)	86.6	85.0	85.5	90.0	87.1	85.6	85.7
% Women* Mammography	35.7	34.2	35.9	34.5	38.4	36.5	31.2

*40 years and older, † 50 years and older
■ Better Outcome (significantly different from state) ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Summary Cancer Indicators (Early Stage) by EOHHS Regions, Massachusetts: 1999-2003

84

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Prostate Cancer Incidence	140.5	129.7	122.4	140.1	128.5	156.6	174.6
Female Breast Cancer Incidence	118.6	112.9	105.3	124.9	119.8	113.1	137.6
Colorectal Cancer Incidence	26.9	25.9	21.3	29.5	24.3	28.7	32.0
Lung Cancer Incidence	14.4	12.0	12.7	15.3	12.4	16.1	19.6

Better Outcome (significantly different from state) Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

Summary Cancer Indicators (Late Stage) by EOHHS Regions, Massachusetts: 1999-2003

85

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Prostate Cancer Incidence	5.5	4.9	5.2	5.9	3.9	6.2	8.7
Female Breast Cancer Incidence	37.8	37.9	31.7	37.0	36.8	38.4	47.3
Colorectal Cancer Incidence	33.8	30.6	32.9	35.2	30.6	34.4	42.7
Lung Cancer Incidence	50.3	45.8	48.6	54.1	41.4	55.1	63.2

Better Outcome (significantly different from state) Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

Summary Cancer Incidence Rates by EOHHS Regions, Massachusetts: 1999-2003

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Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Prostate Cancer	181.9	170.3	159.7	180.5	178.4	202.5	191.3
Female Breast Cancer	138.9	135.3	127.8	139.8	146.7	139.6	134.9
Colorectal Cancer	58.9	56.2	55.2	61.8	57.2	59.7	63.6
Lung Cancer	72.0	67.2	69.9	76.7	65.1	77.5	77.7
Total Cancer	517.0	485.6	478.2	529.4	509.9	543.1	545.1

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

Summary Cancer Mortality Indicators by EOHHS Regions, Massachusetts: 2005

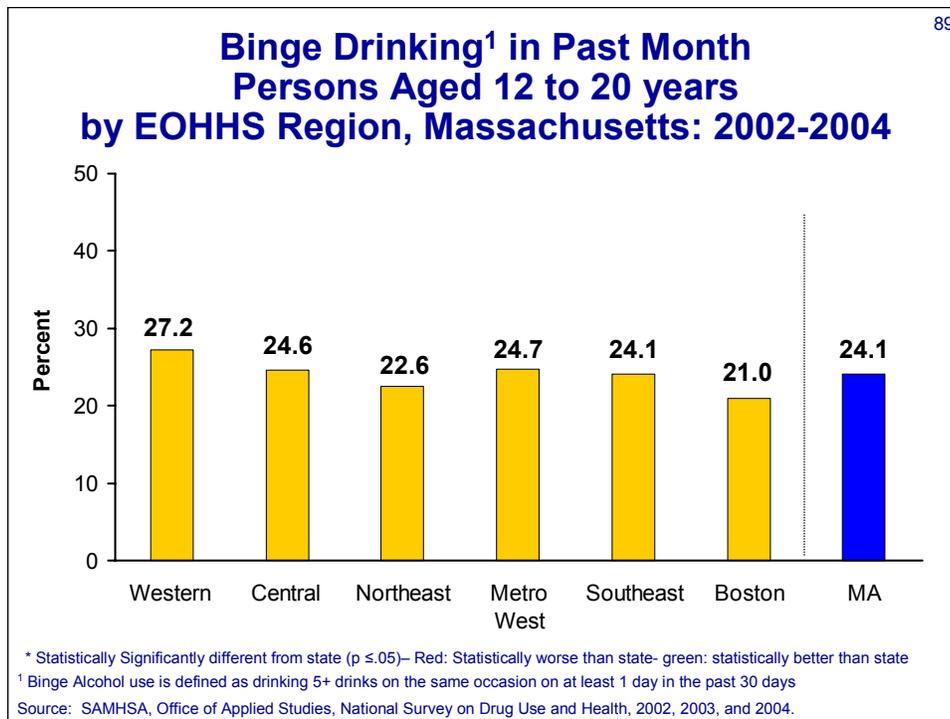
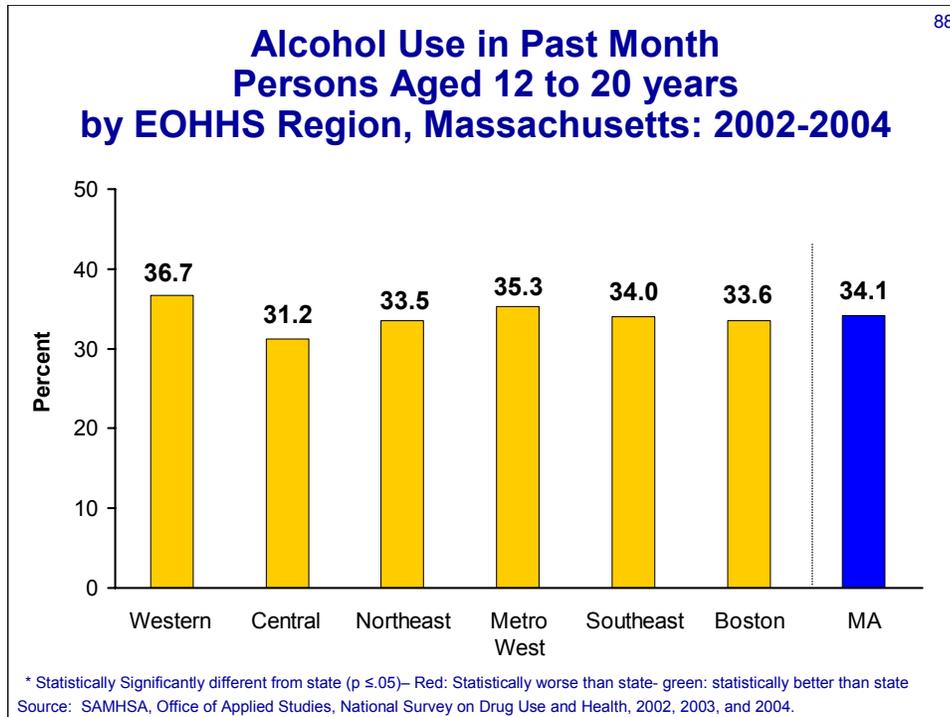
87

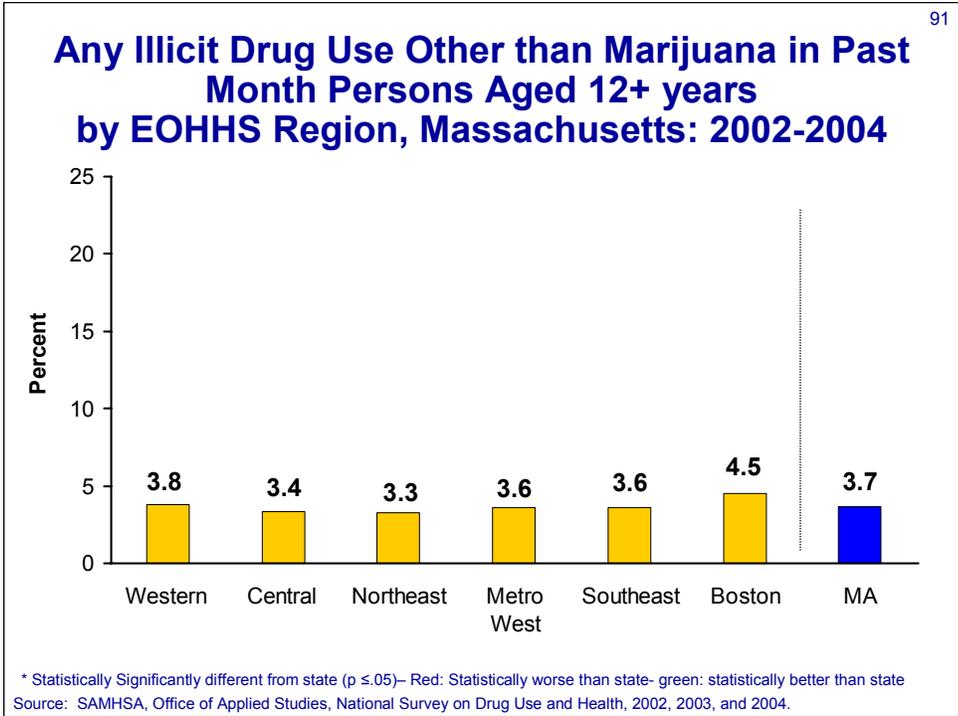
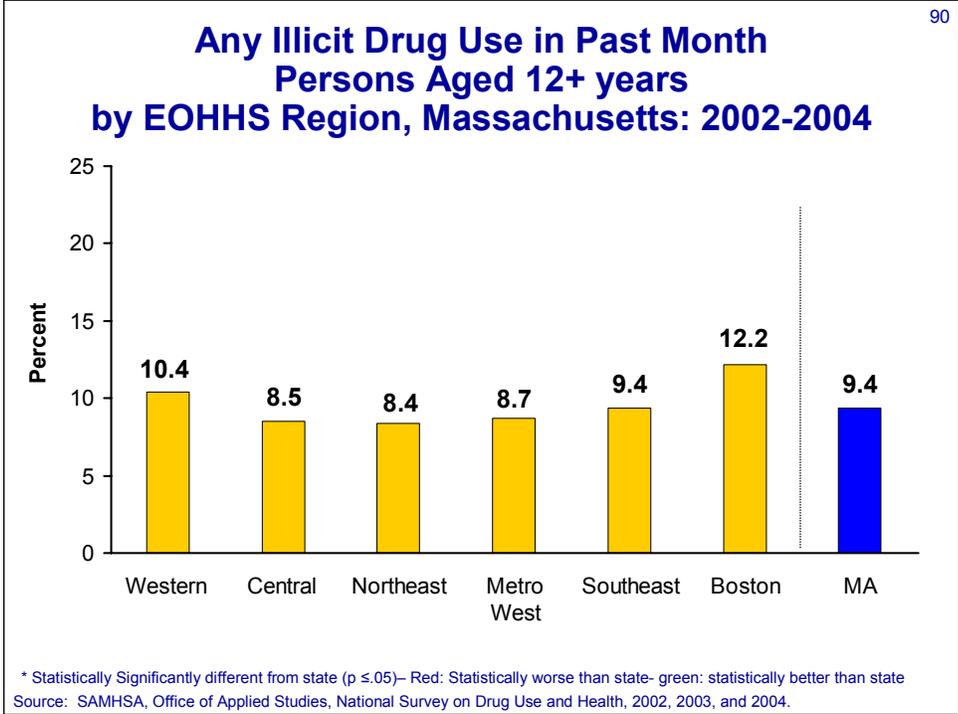
Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Prostate Cancer Death Rate	21.8	25.0	27.7	22.9	18.7	17.9	24.0
Colorectal Cancer Death Rate	17.4	18.2	18.3	17.5	16.4	17.2	18.4
Female Breast Cancer Death Rate	23.0	25.5	23.1	23.1	20.9	22.5	24.6
Lung Cancer Death Rate	52.4	56.0	55.4	57.3	44.6	52.1	54.2

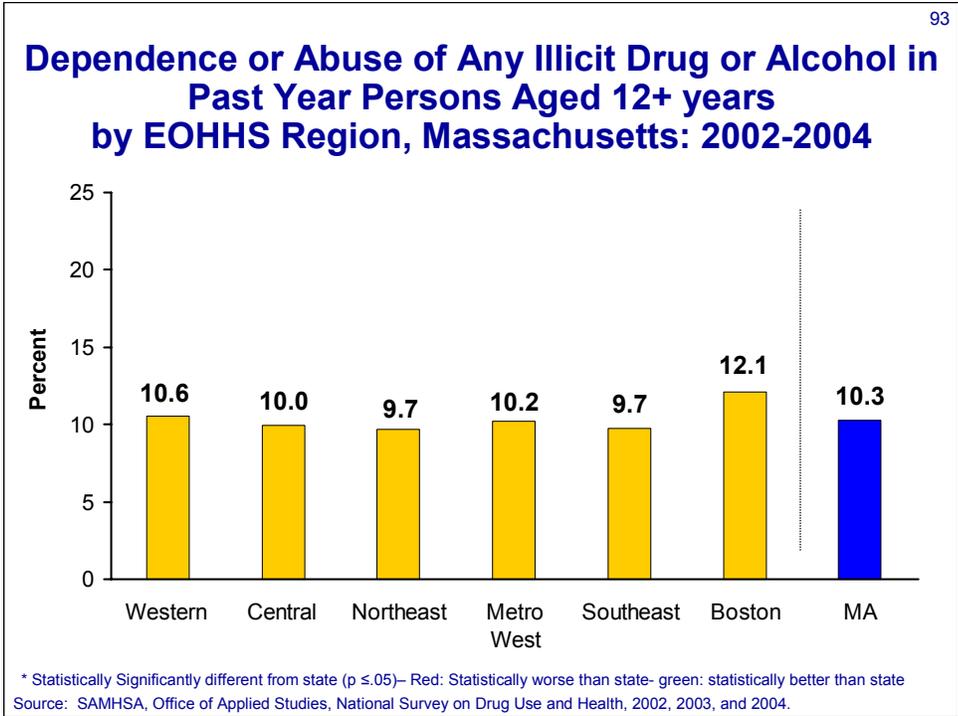
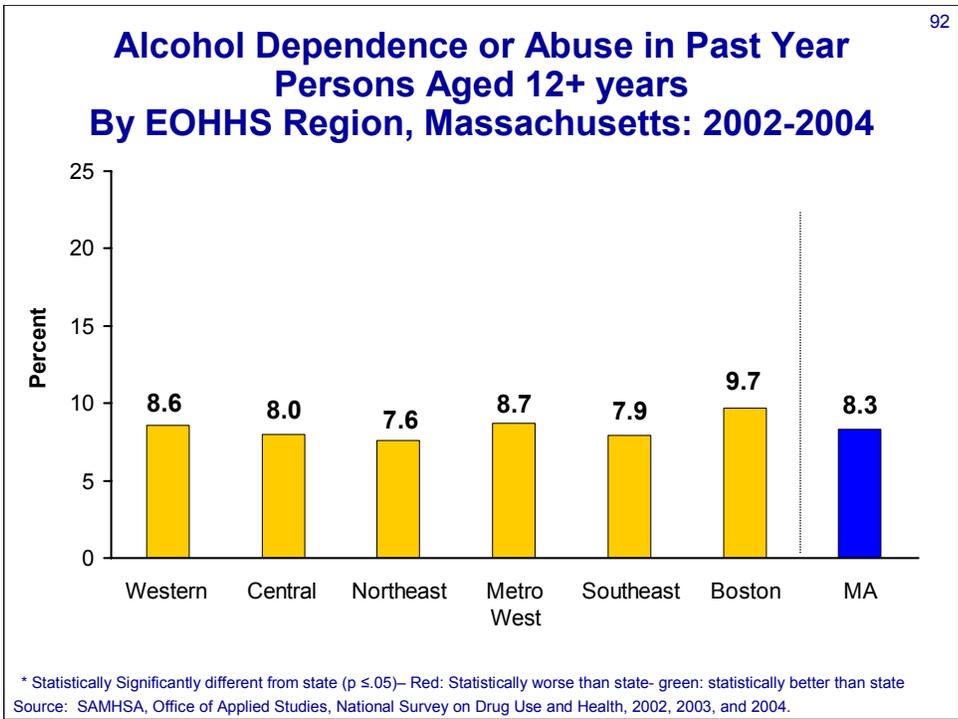
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

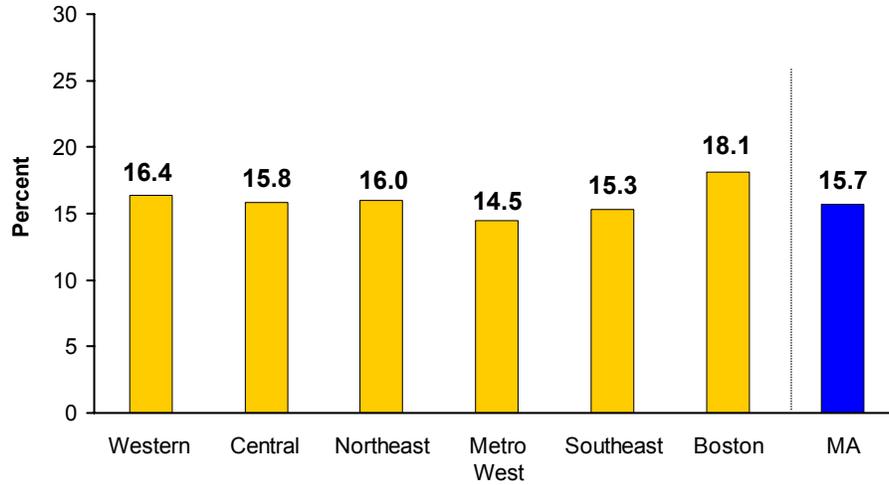
SUBSTANCE ABUSE





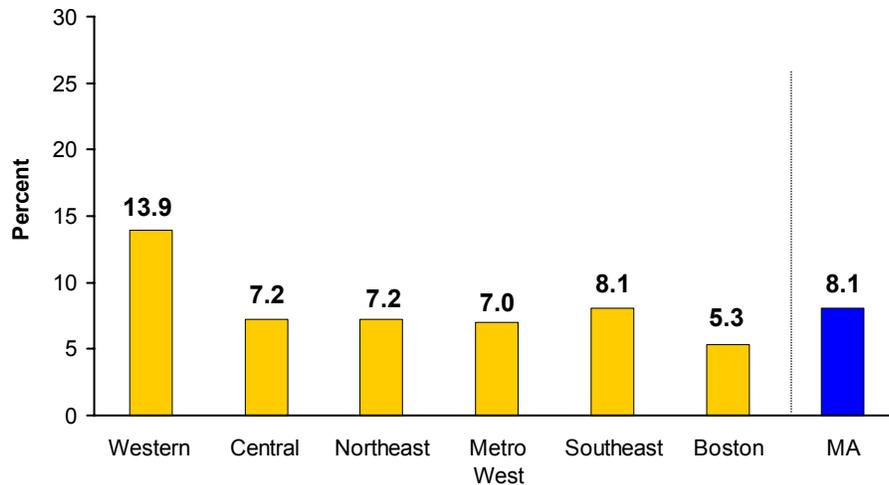


Adults who Binge Drink by EOHHS Region, Massachusetts: 2005

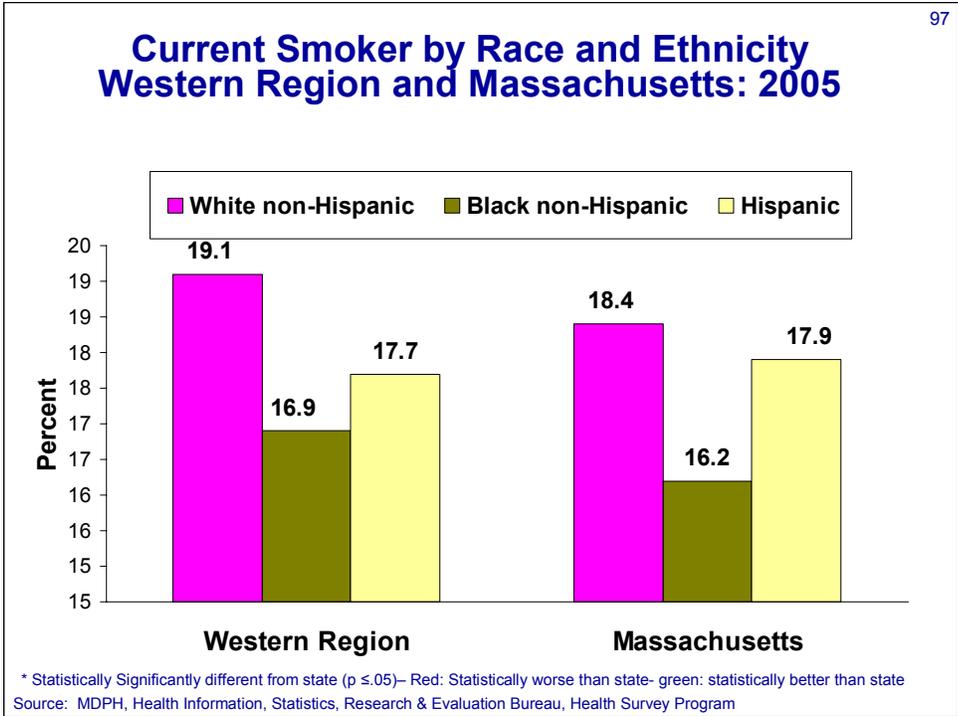
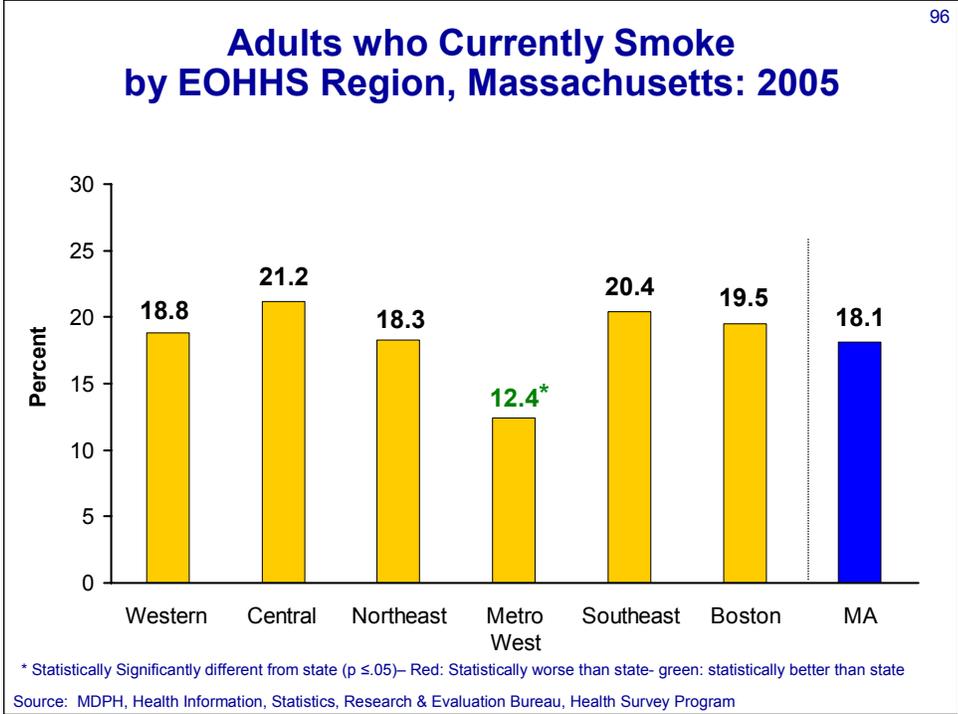


* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

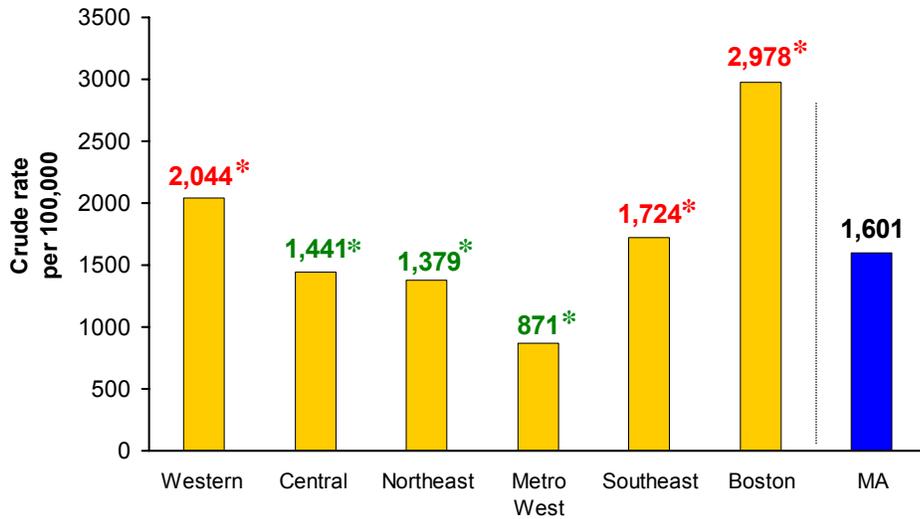
Adults who Used Illicit Drugs in Past Month by EOHHS Region, Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

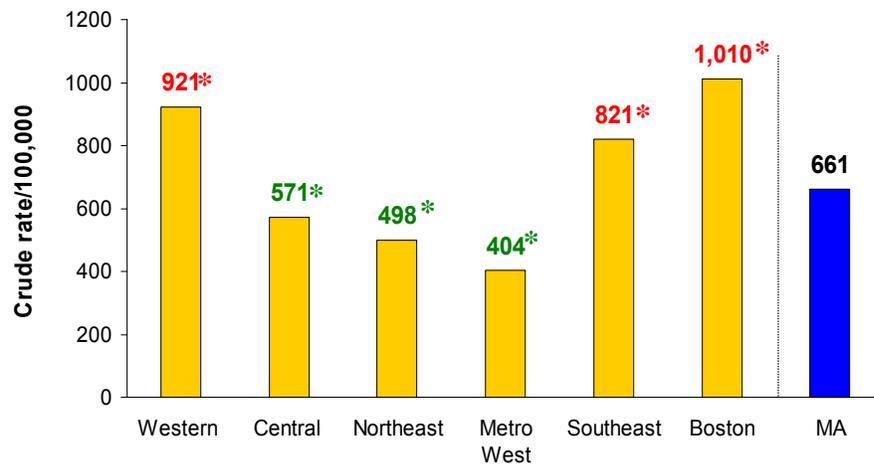


Substance Abuse Treatment Program Admissions by EOHHS Region, Massachusetts: 2005



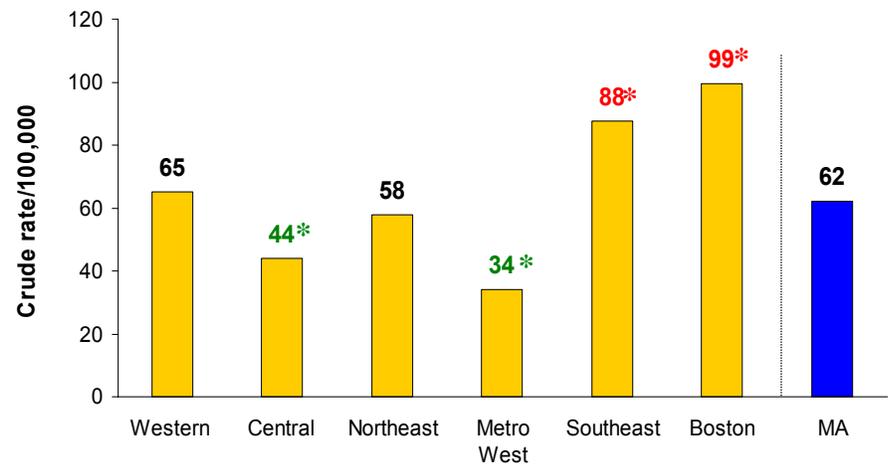
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatment Program Admissions- Alcohol Primary Substance by EOHHS Region, Massachusetts: 2005



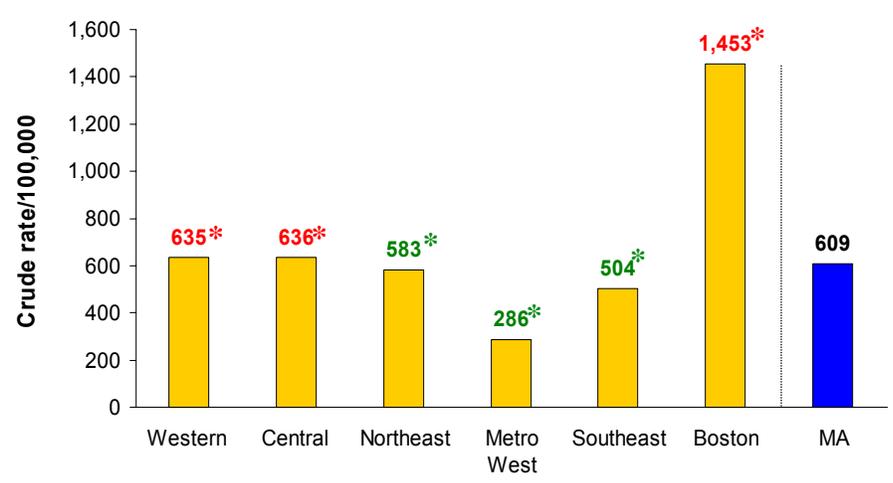
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatment Program Admissions- Cocaine Primary Substance by EOHHS Region, Massachusetts: 2005



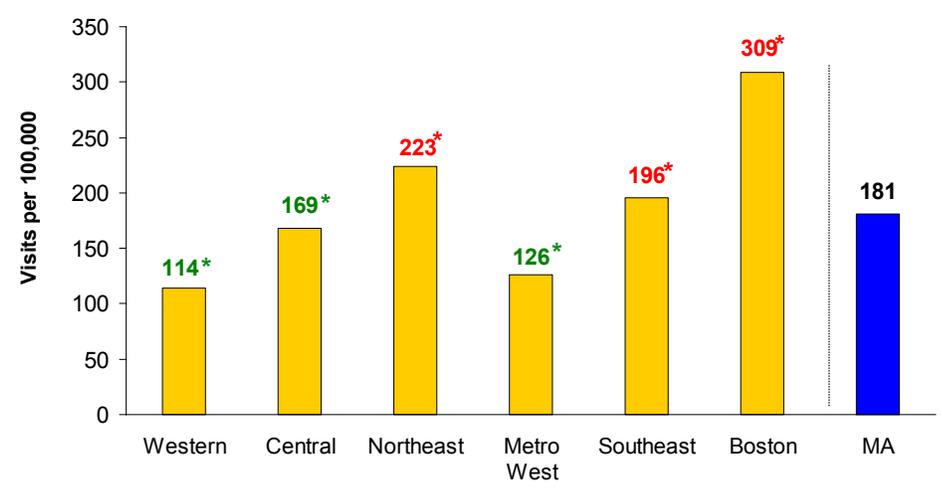
* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatment Program Admissions- Heroin Primary Substance by EOHHS Region, Massachusetts: 2005



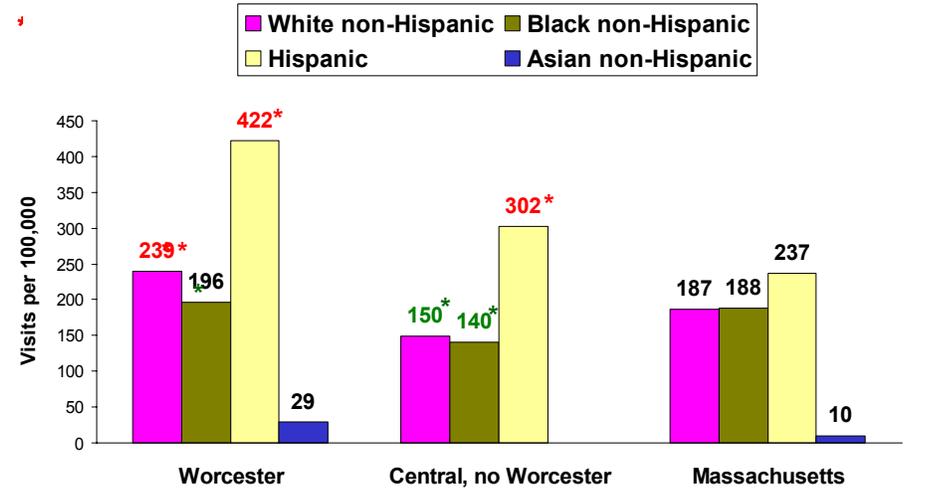
* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Opioid-related Emergency Visit Rates by EOHHS Region, Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

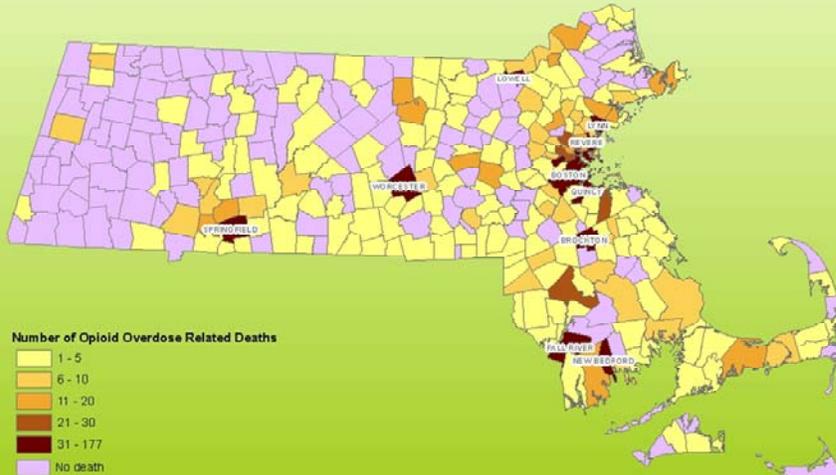
Opioid-Related Emergency Department Visit Rate by Race/Ethnicity Central Region and Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Bureau of Substance Abuse Services



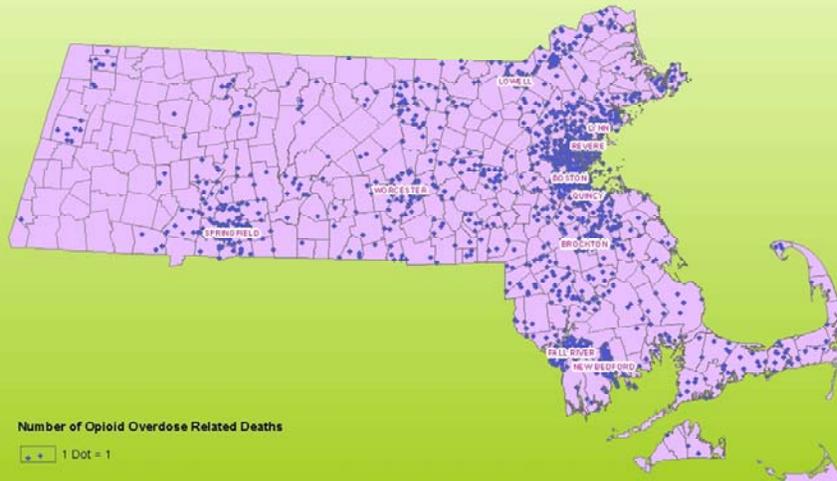
Massachusetts City and Town FY03-05 Total Number Of Opioid Overdose Related Deaths



Data Source: Registry of Vital Records and Statistics, MA Department of Public Health
* City and town names are shown where there were more than 30 deaths

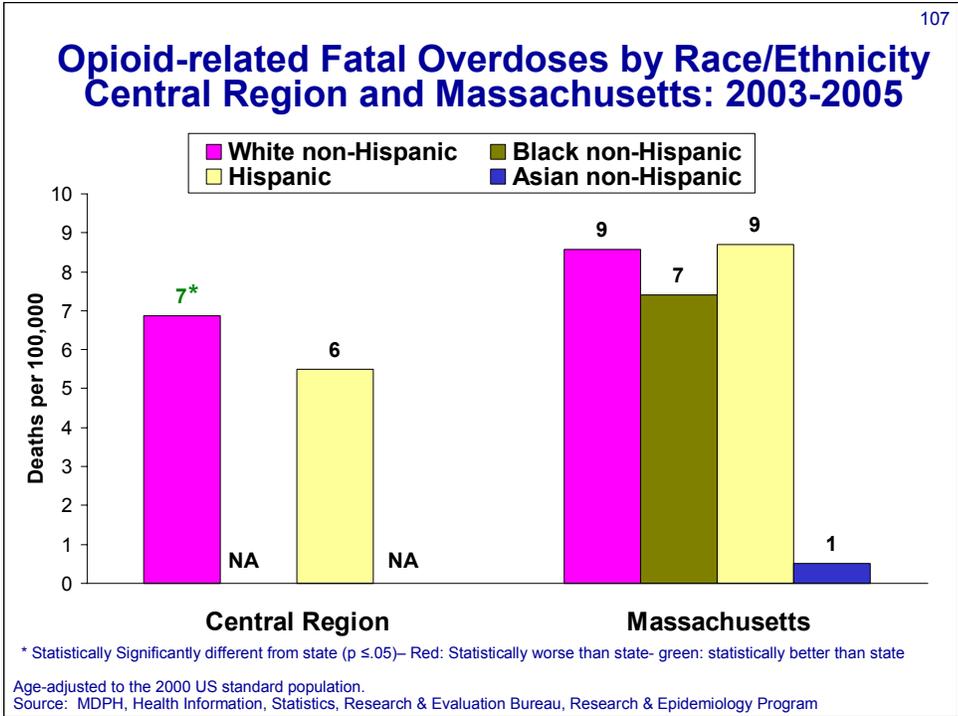
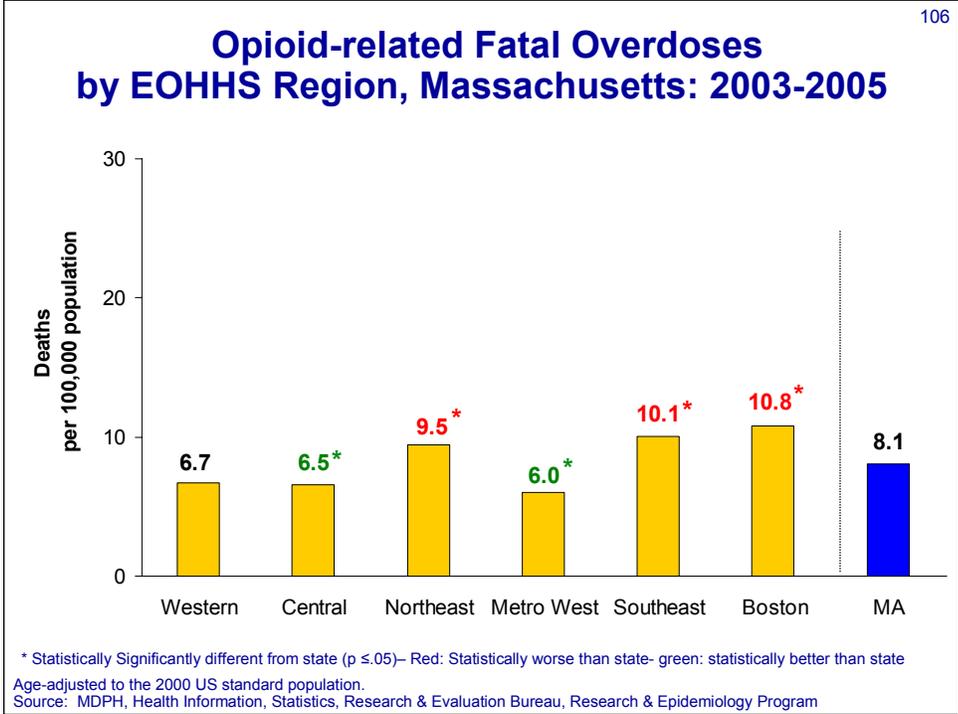


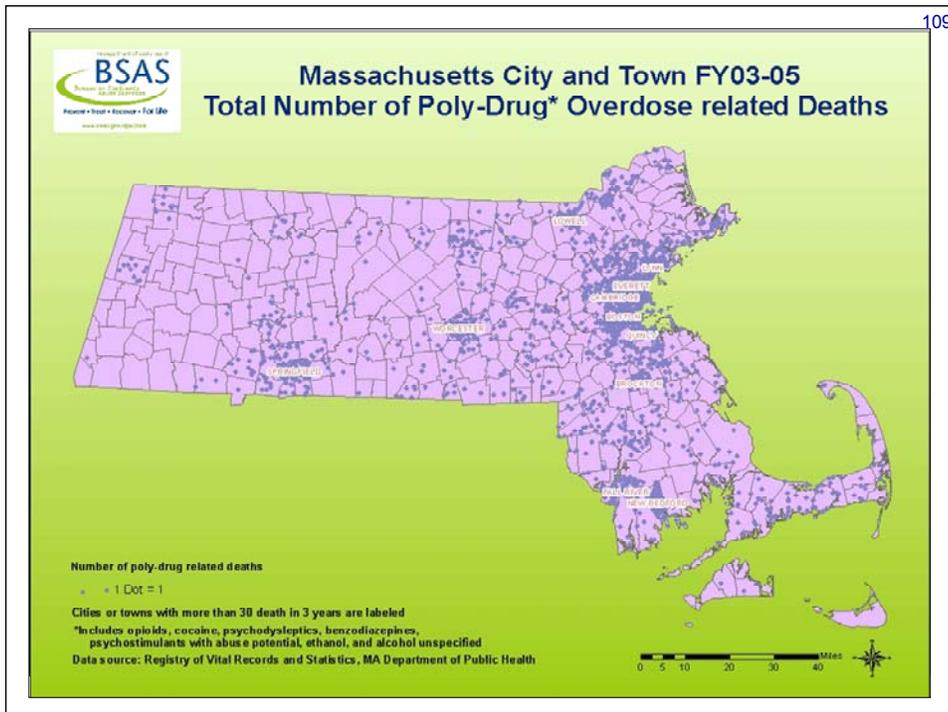
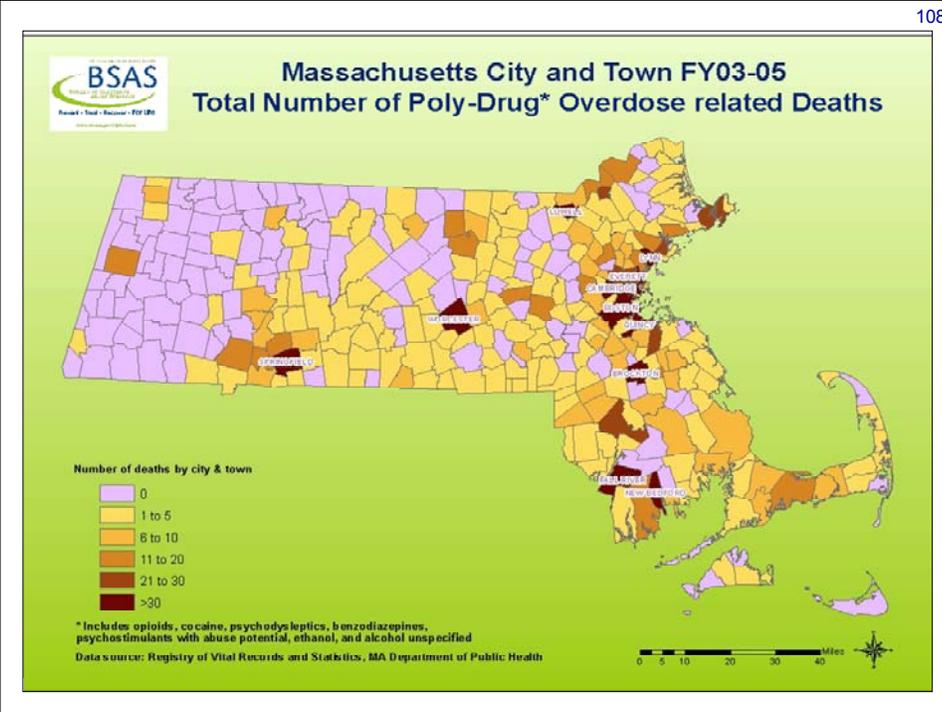
Massachusetts City and Town FY03-05 Total Number Of Opioid Overdose Related Deaths



Data Source: Registry of Vital Records and Statistics, MA Department of Public Health
* City and town names are shown where there were more than 30 deaths







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Summary Substance Abuse Indicators by EOHHS Region

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Past Month Alcohol 12-20 years	34.1	36.7	31.2	33.5	35.3	34.0	33.6
Past Month Binge Drinking- 12-20 years	24.1	27.2	24.6	22.6	24.7	24.1	21.0
Any Illicit Drug Use Past Month, Ages 12+	9.4	10.4	8.5	8.4	8.7	9.4	12.2
Any Illicit Drug Use Other than Marijuana Past Month, Ages 12+	3.7	3.8	3.4	3.3	3.6	3.6	4.5
Alcohol Dependence or Abuse past Year, Ages 12+	8.3	8.6	8.0	7.6	8.7	7.9	9.7
Dependence or Abuse of Alcohol or Any Illicit Drug, Ages 12+	10.3	10.6	10.0	9.7	10.2	9.7	12.1

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

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Summary Substance Abuse Indicators by EOHHS Region, Massachusetts:2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Adults Binge Drinking	15.7	16.4	15.8	16.0	14.5	15.3	18.1
% Adults Smoking	18.1	18.8	21.2	18.3	12.4	20.4	19.5
% Adults using illicit drugs	8.1	13.9	7.2	7.2	7.0	8.1	5.3
Substance Abuse Treatment Program Admissions Rate	1,601	2,044	1,441	1,379	871	1,724	2,978
Substance Abuse Treatment Program Admissions Rate-- Alcohol	661	921	571	498	404	821	1,010
Substance Abuse Treatment Program Admissions Rate-- Cocaine	62	65	44	58	34	88	99
Substance Abuse Treatment Program Admissions Rate-- Heroin	609	635	636	583	286	504	1,453

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

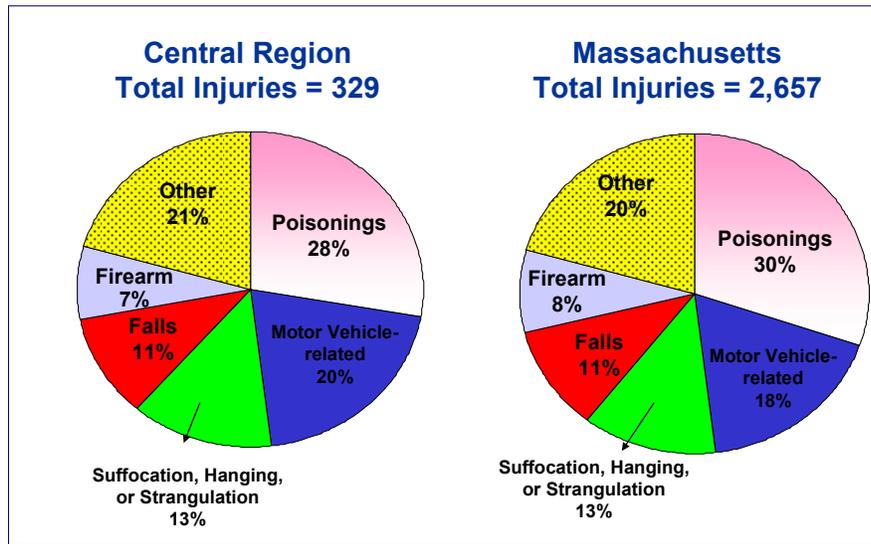
Summary Opioid Indicators by EOHHS Regions Massachusetts: 2003-2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Opioid-related Emergency Department Visit Rate	181	114	169	223	126	196	309
Opioid-related fatal overdose rate	8.1	6.7	6.5	9.5	6.0	10.1	10.8

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

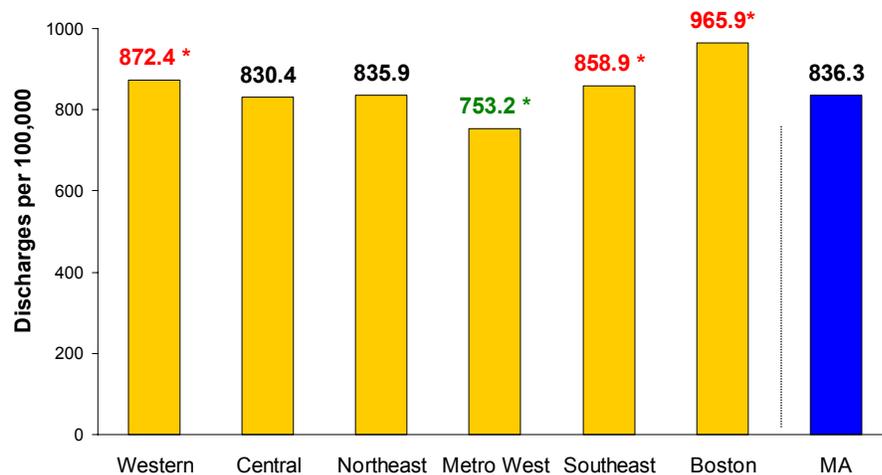
INJURY, VIOLENCE, AND OCCUPATIONAL HEALTH

Causes of Injury Deaths Central Region and Massachusetts: 2005



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Injury-related Hospital Discharge Rates by EOHHS Region, Massachusetts: 2003-2005

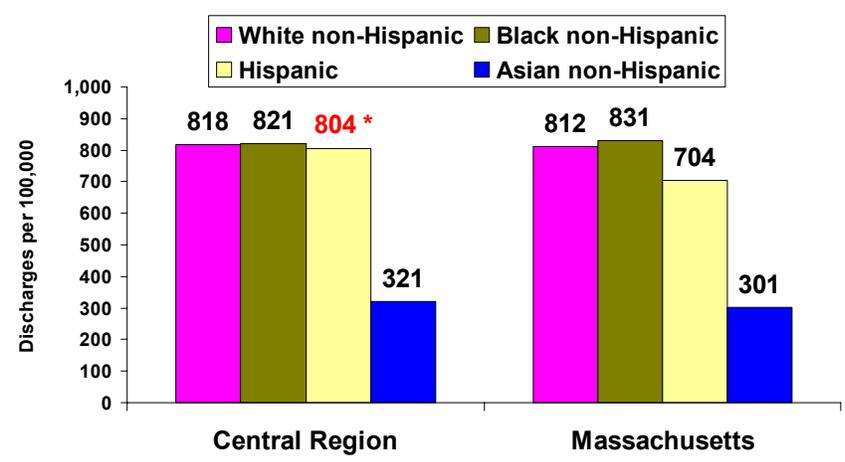


* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

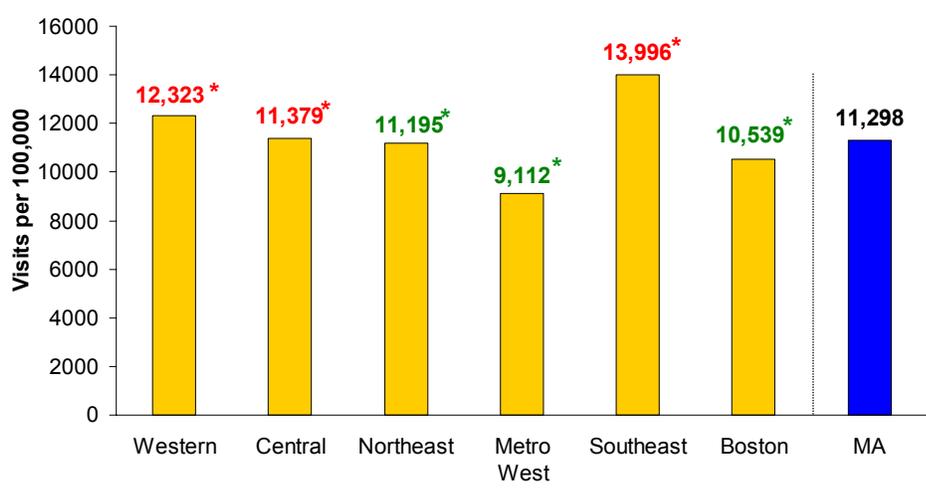
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Injury-related Hospital Discharge Rates by Race/Ethnicity, Central Region & Massachusetts: 2003-2005



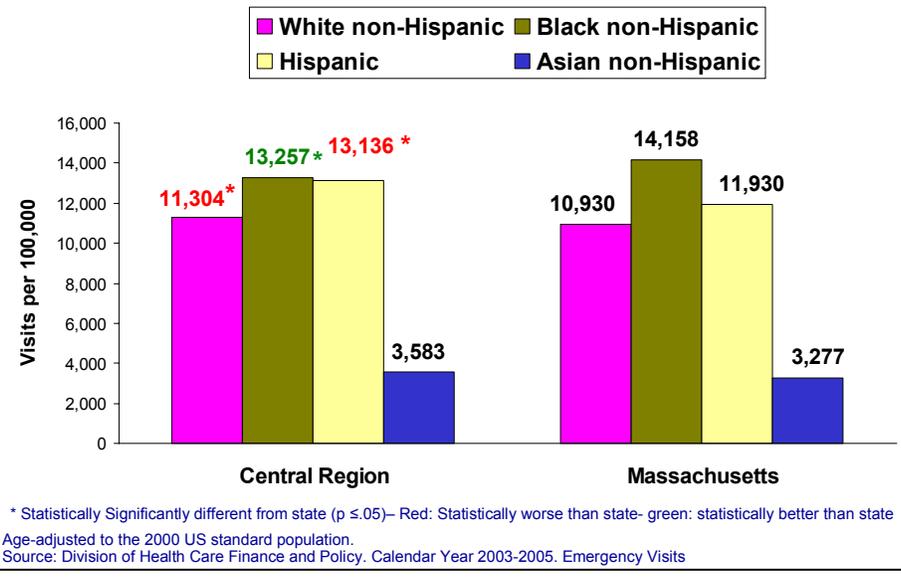
* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Emergency Department Visit Rates for Injuries & Poisonings by EOHHS Region Massachusetts: 2003-2005

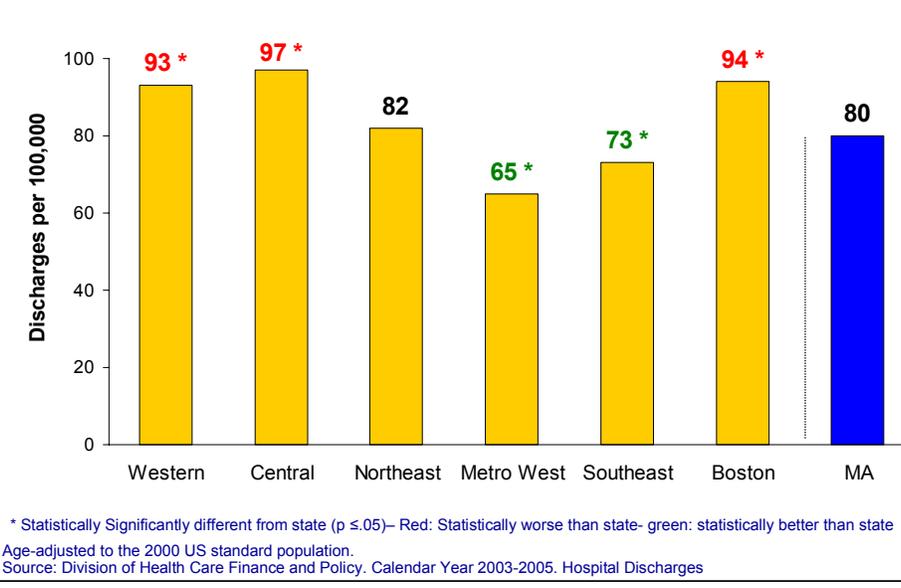


* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits

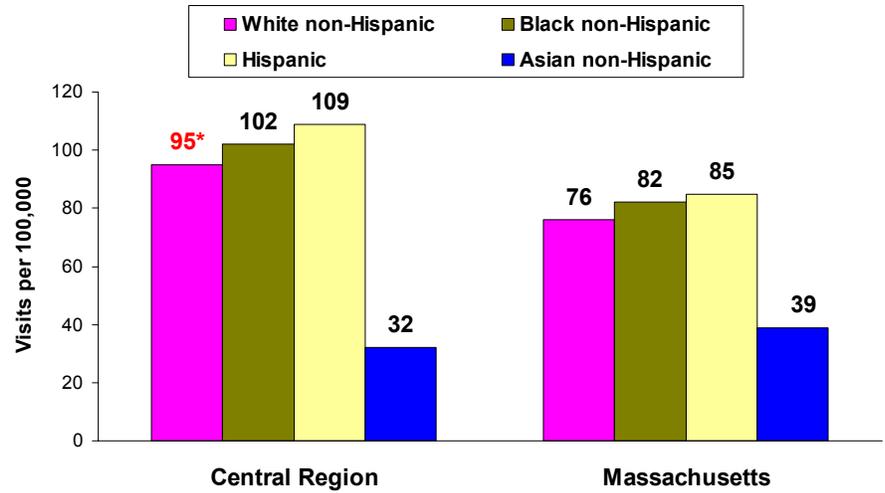
Emergency Department Visit Rates for Injuries & Poisonings by Race/Ethnicity Central Region and Massachusetts: 2003-2005



Hospital Discharge Rates for Traumatic Brain Injuries by EOHHS Region, Massachusetts: 2003-2005

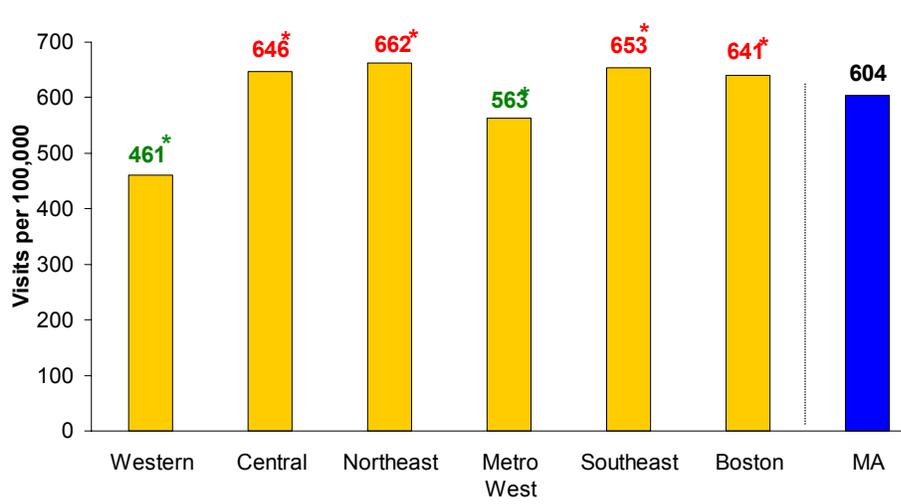


Hospital Discharge Rates for Traumatic Brain Injury by Race/Ethnicity, Central Region and Massachusetts: 2003-2005



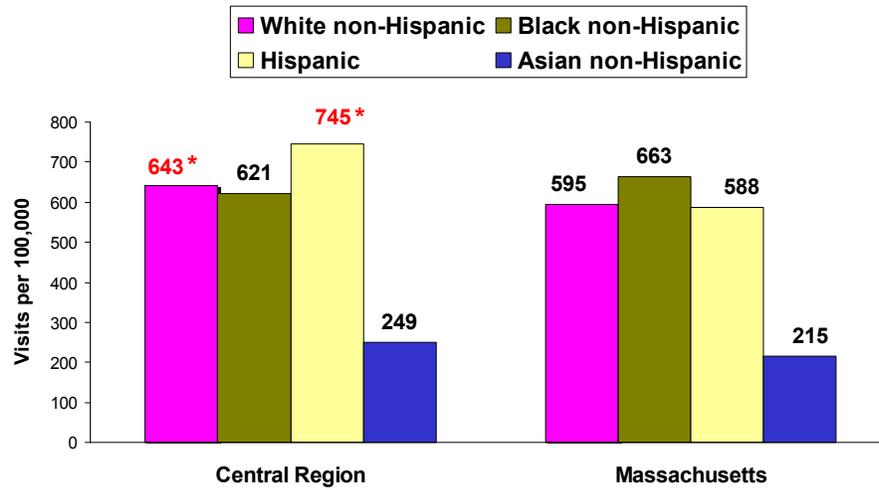
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Emergency Department Visit Rates for Traumatic Brain Injury by EOHHS Region, Massachusetts: 2003-2005



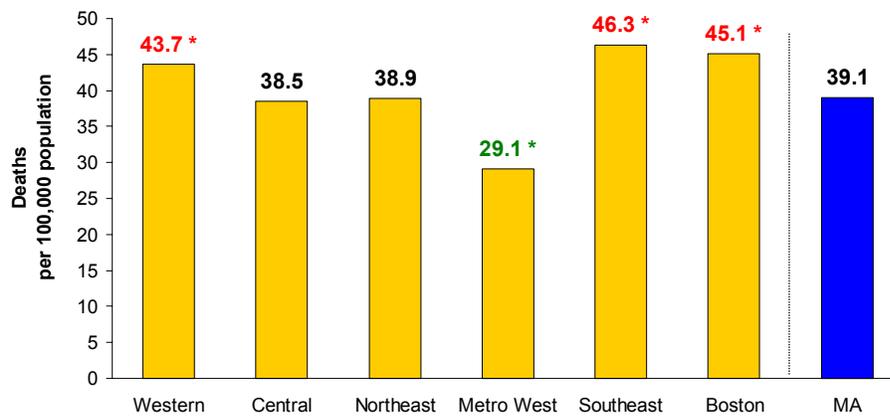
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits

Emergency Department Visit Rates for Traumatic Brain Injury by Race/Ethnicity Central Region and Massachusetts: 2003-2005



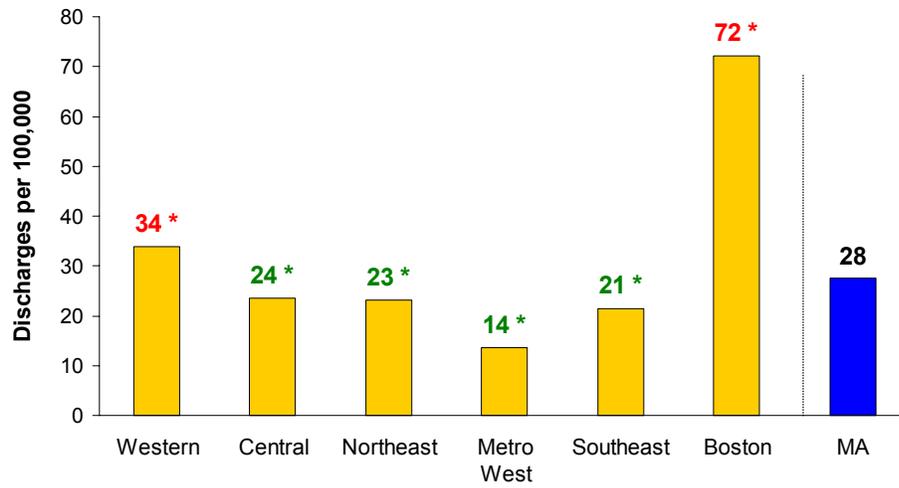
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits

Injury Death Rates by EOHHS Region Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

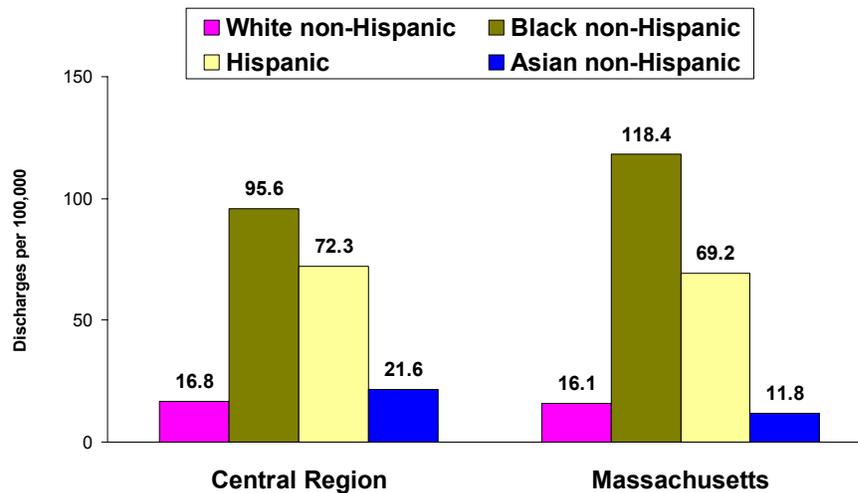
Hospital Discharge Rates for Assaults by EOHHS Region, Massachusetts: 2003-2005



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state Age-adjusted to the 2000 US standard population.

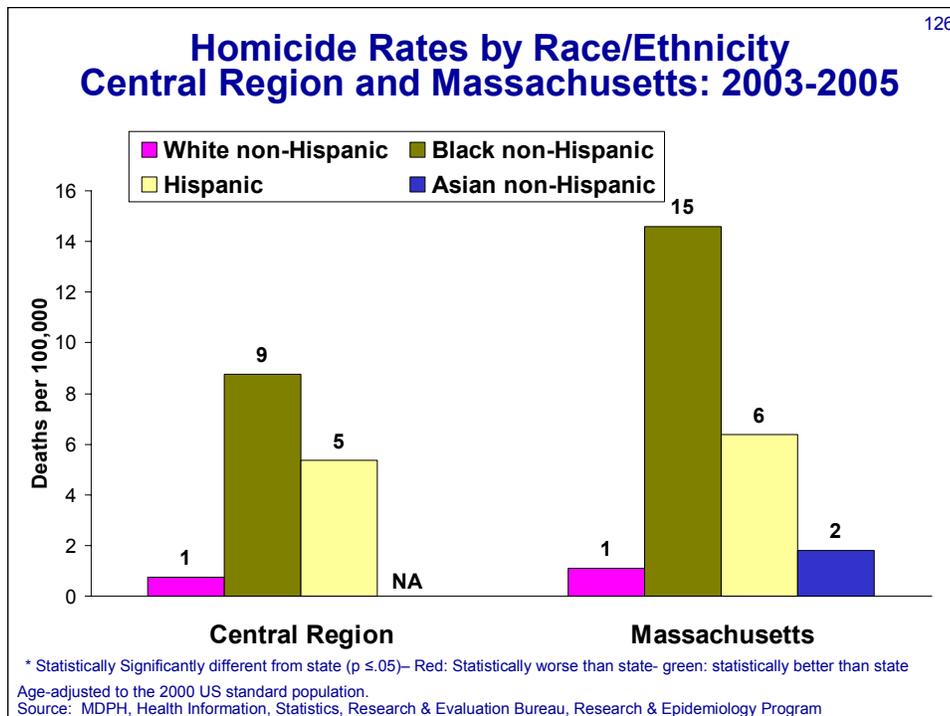
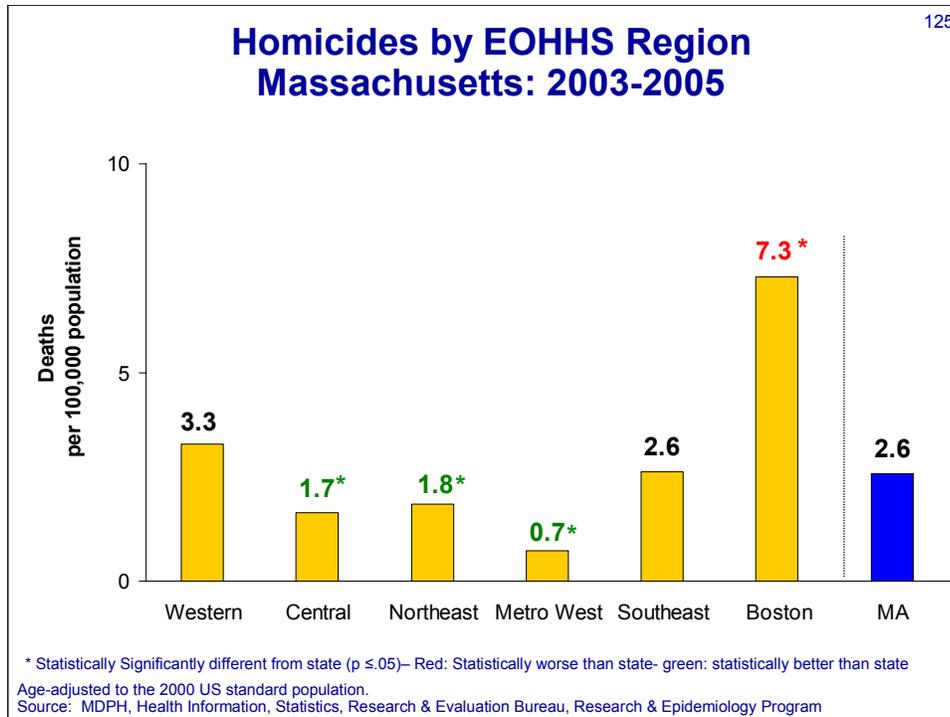
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Hospital Discharge Rates for Assaults by Race/Ethnicity, Central Region and Massachusetts: 2003-2005

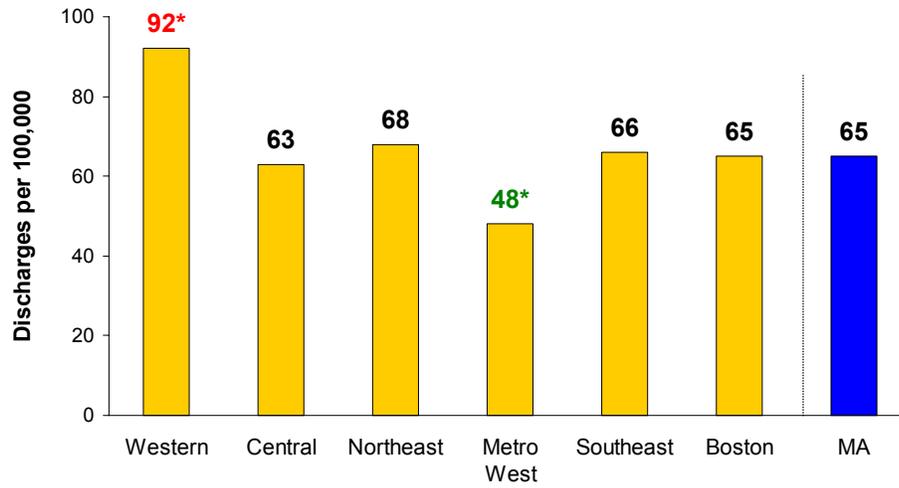


* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges



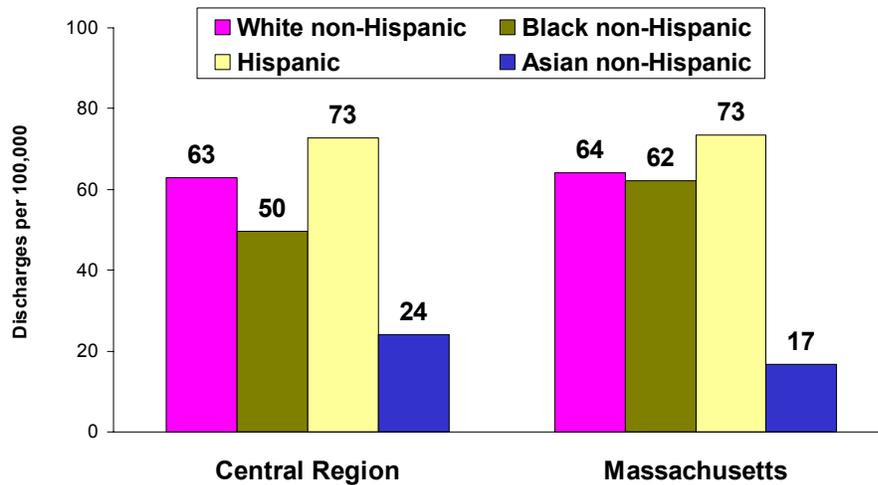
Hospital Discharge Rates for Self-inflicted Injury by EOHHS Region, Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

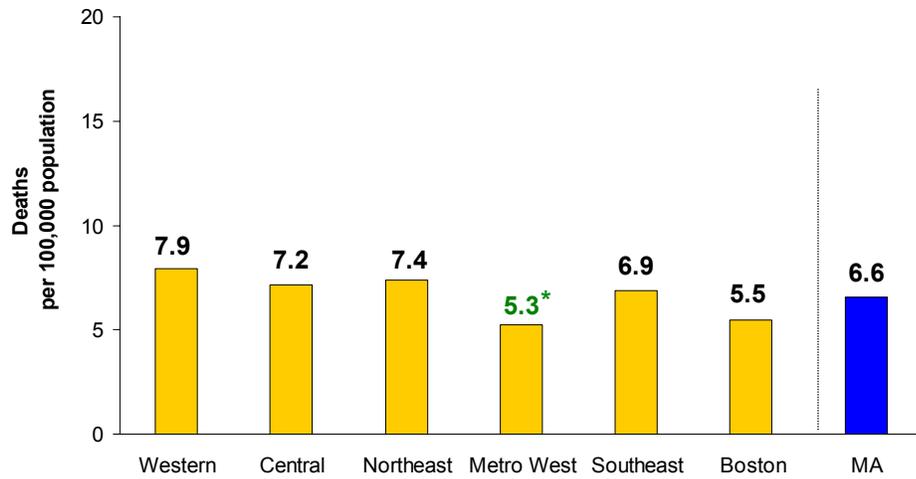
Hospital Discharge Rates for Self-inflicted Injuries by Race/Ethnicity, Central Region and Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state Age-adjusted to the 2000 US standard population.

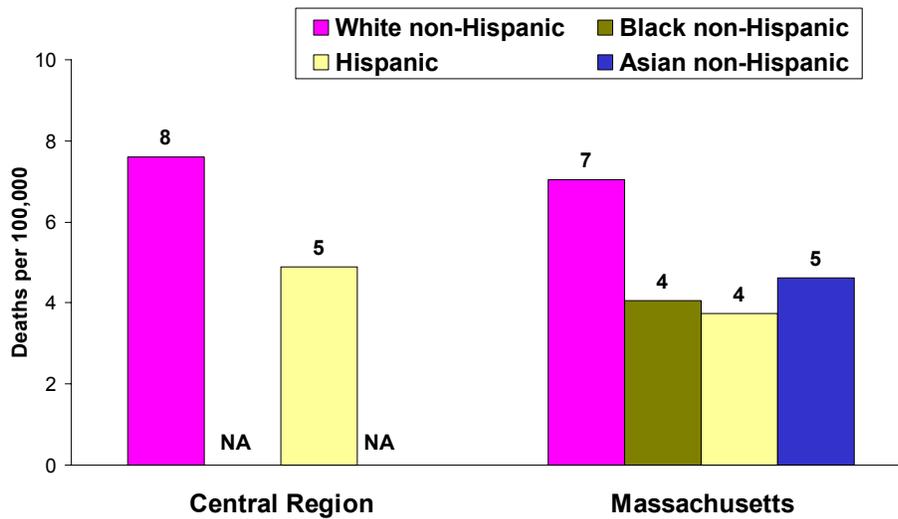
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Suicides by EOHHS Region Massachusetts: 2003-2005



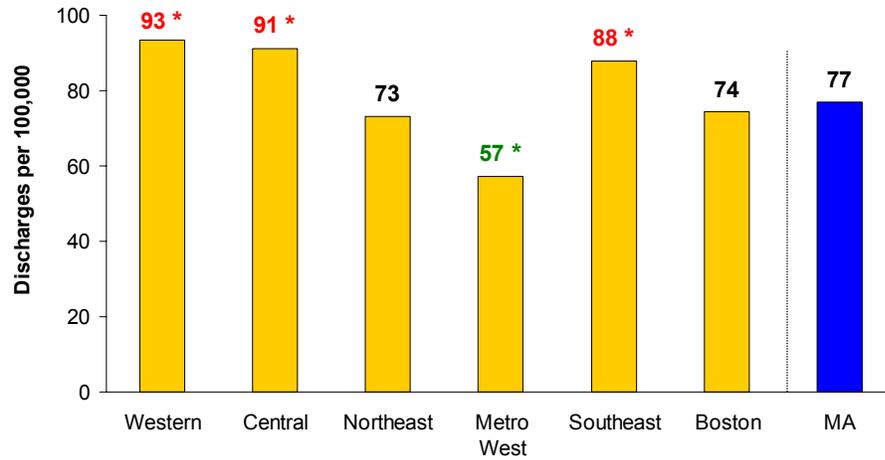
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Suicide Rates by Race/Ethnicity Central Region and Massachusetts: 2003-2005



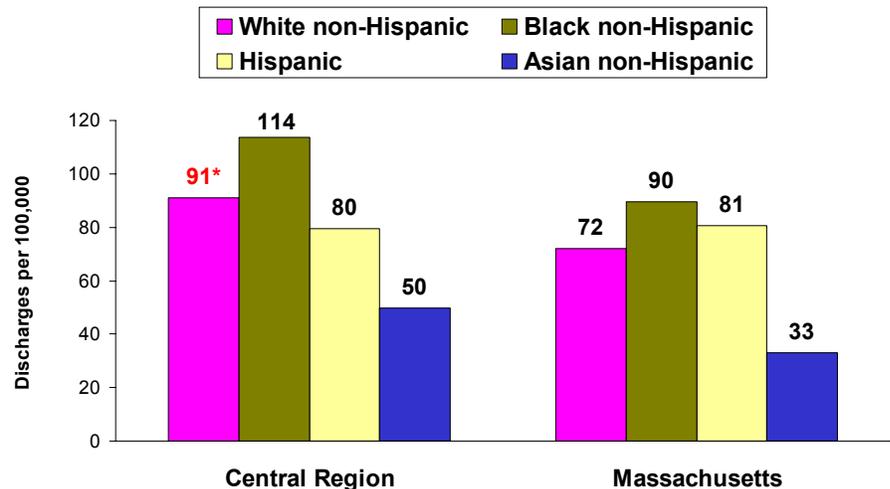
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Hospital Discharge Rates for Motor Vehicle-related Injuries by EOHHS Region and Massachusetts: 2003-2005



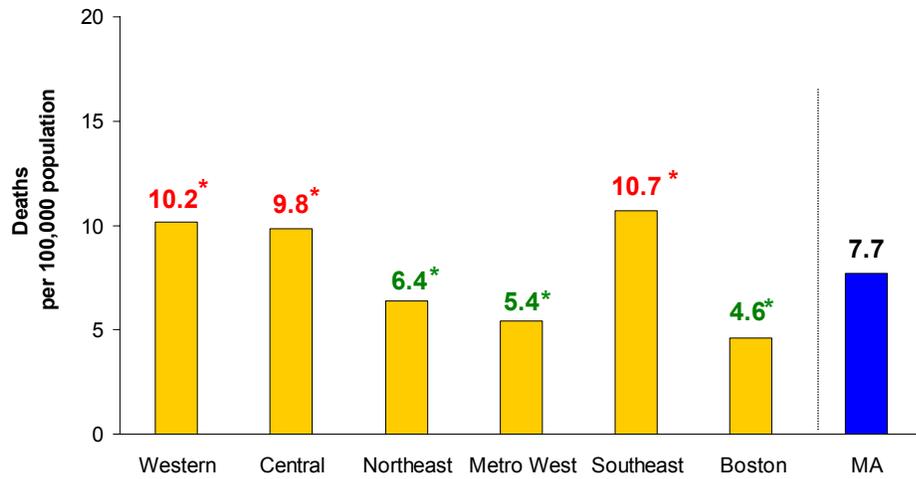
* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Hospital Discharge Dataset System, Massachusetts Division of Health Care Finance and Policy

Hospital Discharge Rates for Motor Vehicle-related Injuries by Race/Ethnicity, Central Region and Massachusetts: 2003-2005



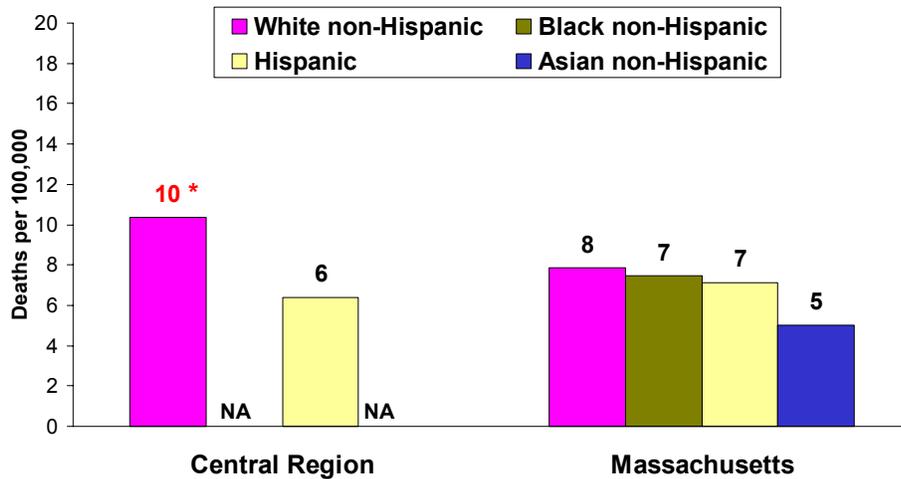
* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Motor Vehicle-related Mortality Rates by EOHHS Region, Massachusetts: 2003-2005

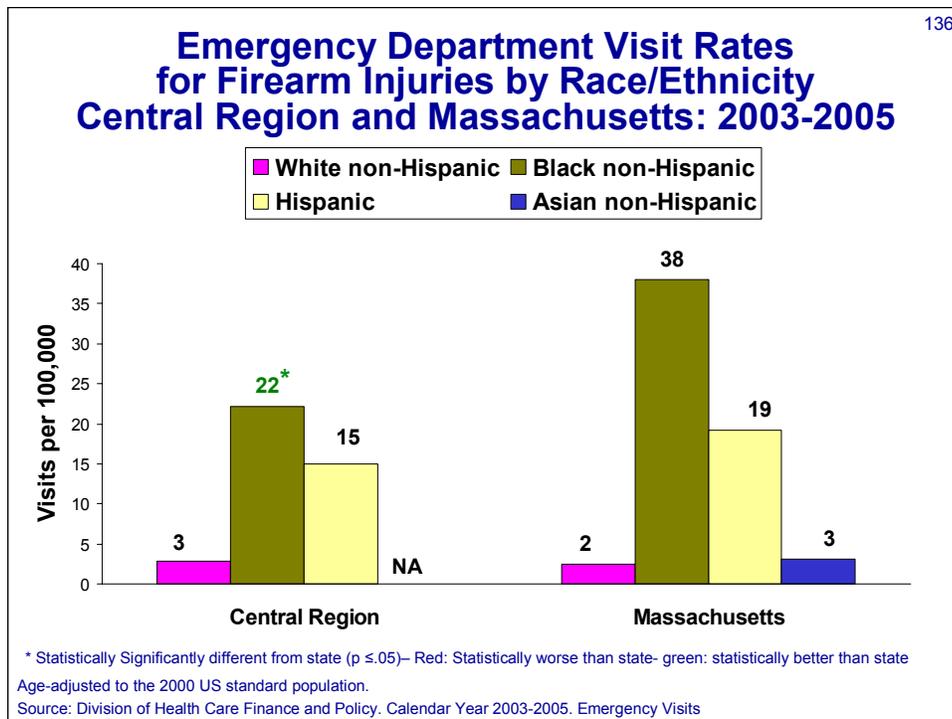
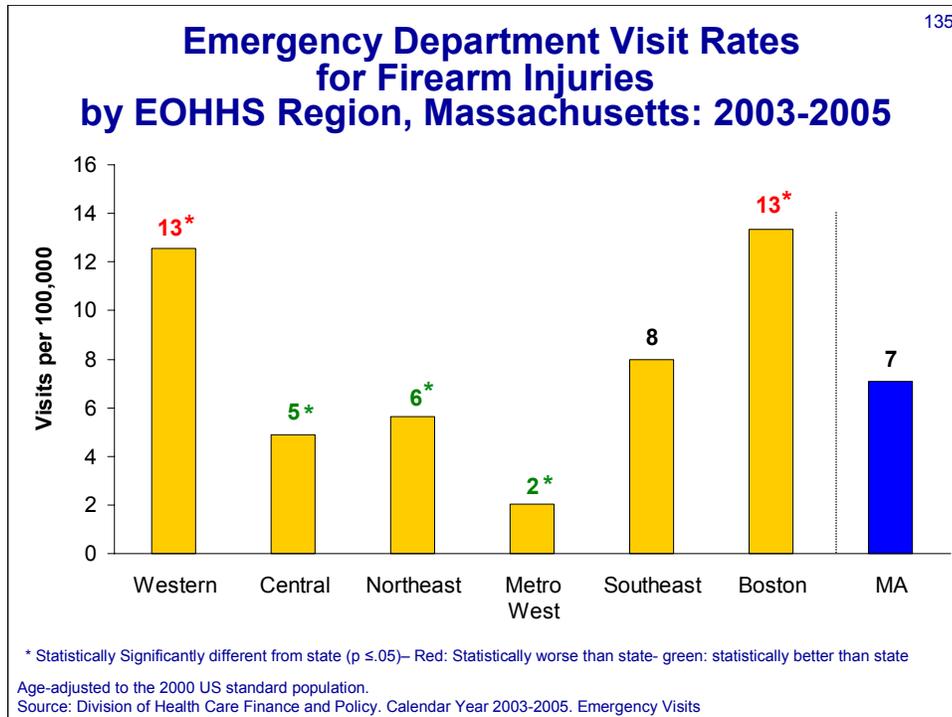


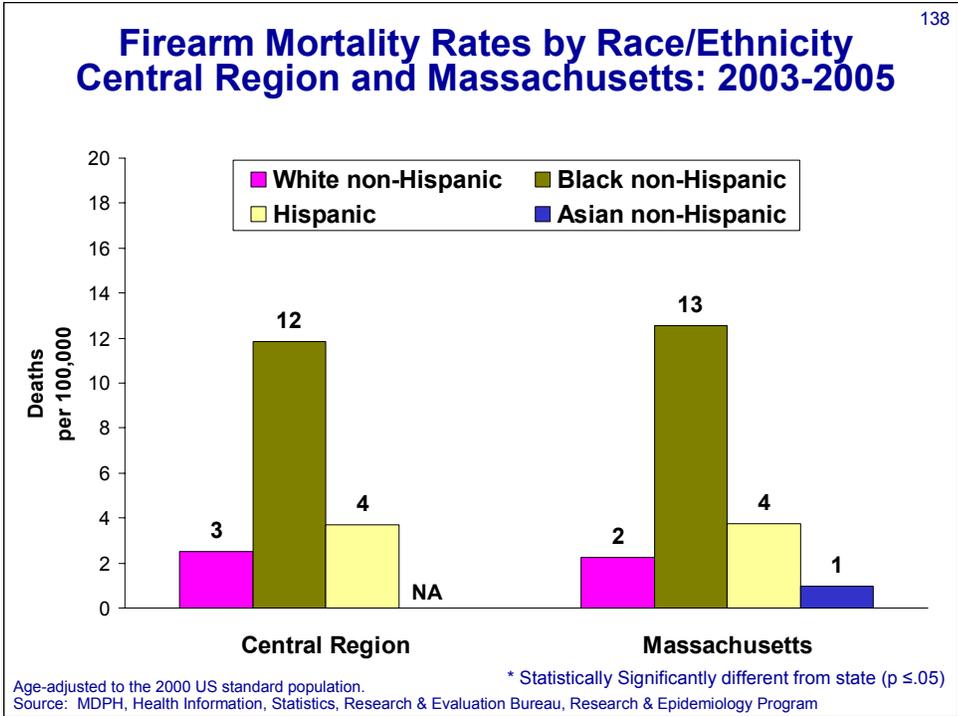
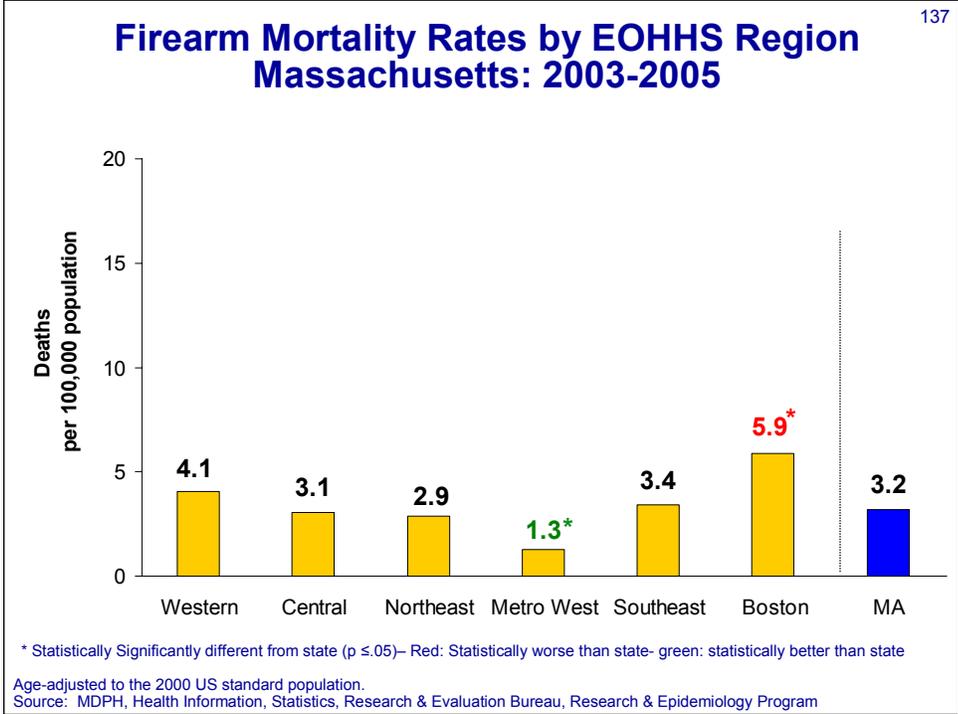
* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Motor Vehicle-related Mortality Rates by Race/Ethnicity Central Region and Massachusetts: 2003-2005

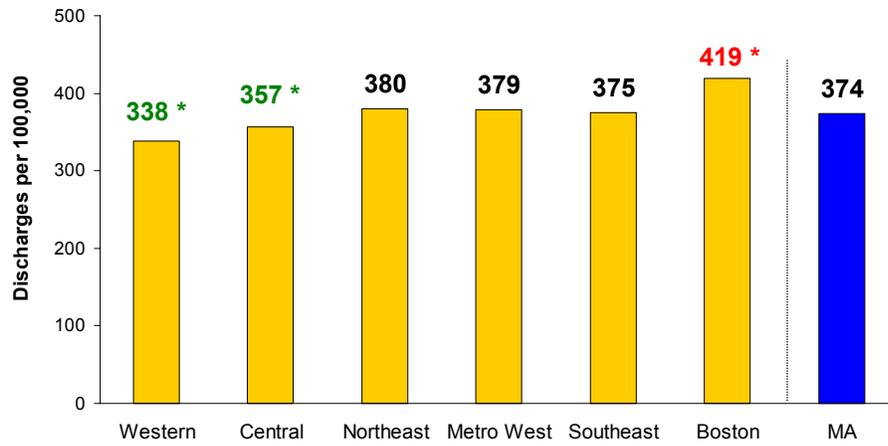


* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program





Hospital Discharge Rates for Fall-related Injuries by EOHHS Region, Massachusetts: 2003-2005

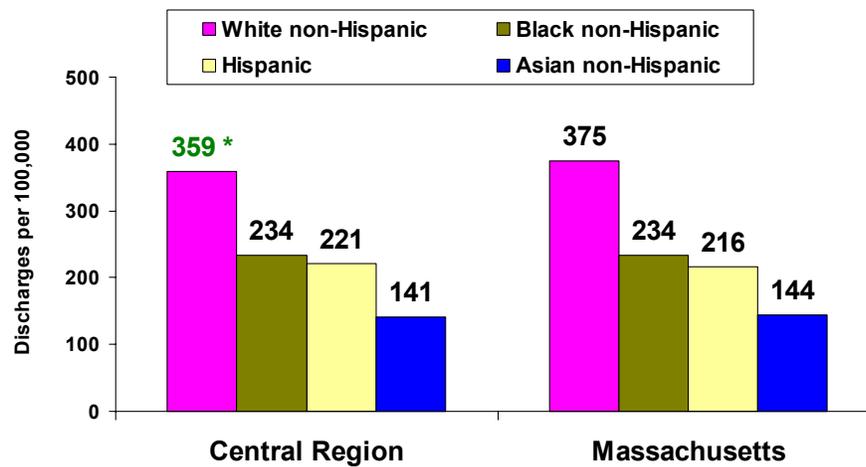


* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

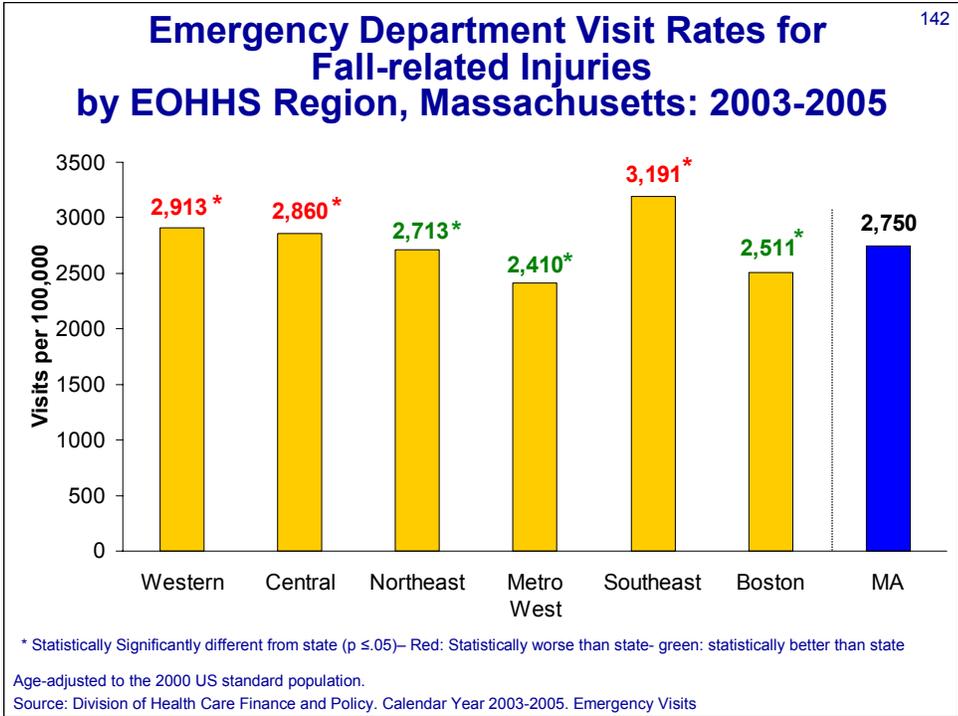
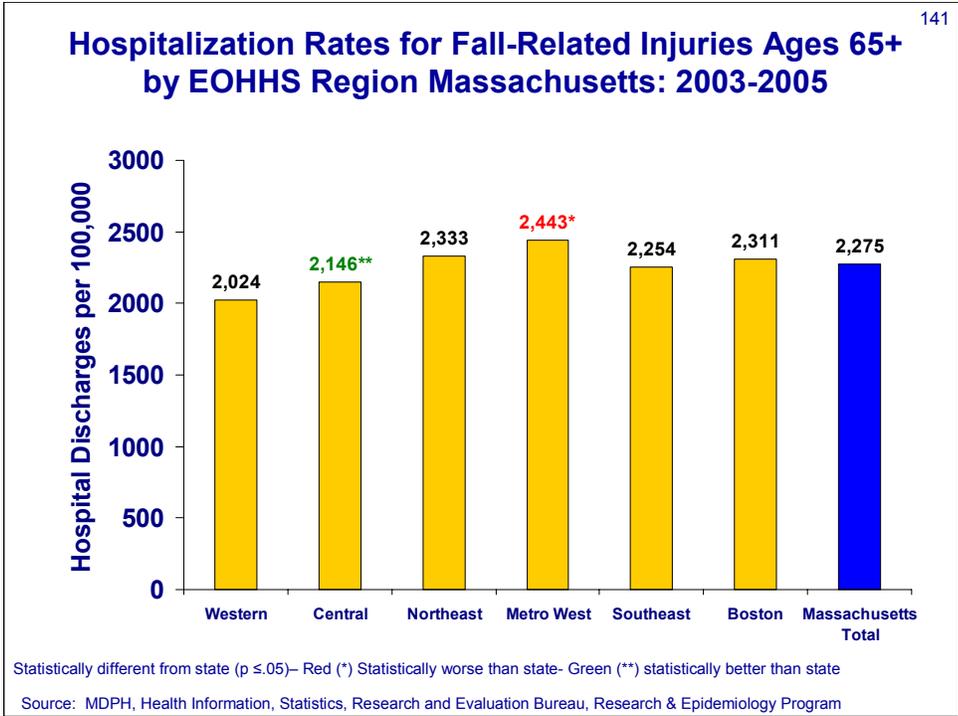
Hospital Discharge Rates for Fall-related Injuries by Race/Ethnicity, Central Region and Massachusetts: 2003-2005



* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

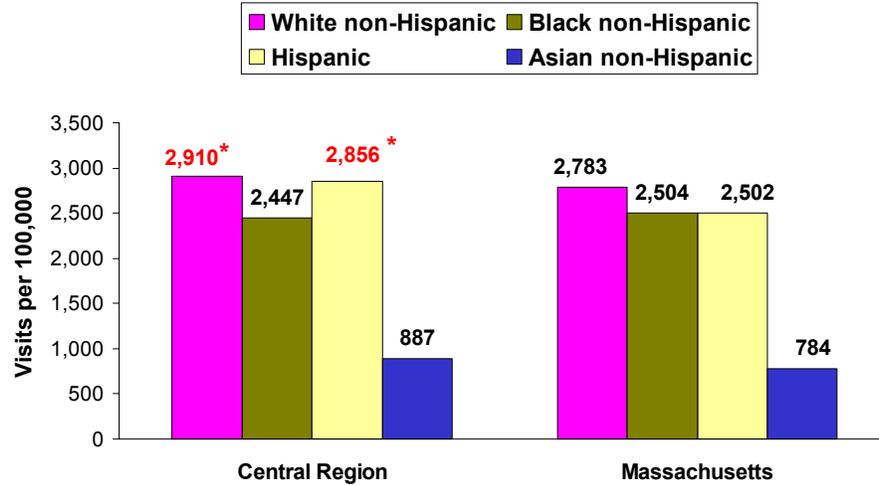
Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges



Emergency Department Visit Rates for Fall-related Injuries by Race/Ethnicity Central Region and Massachusetts: 2003-2005

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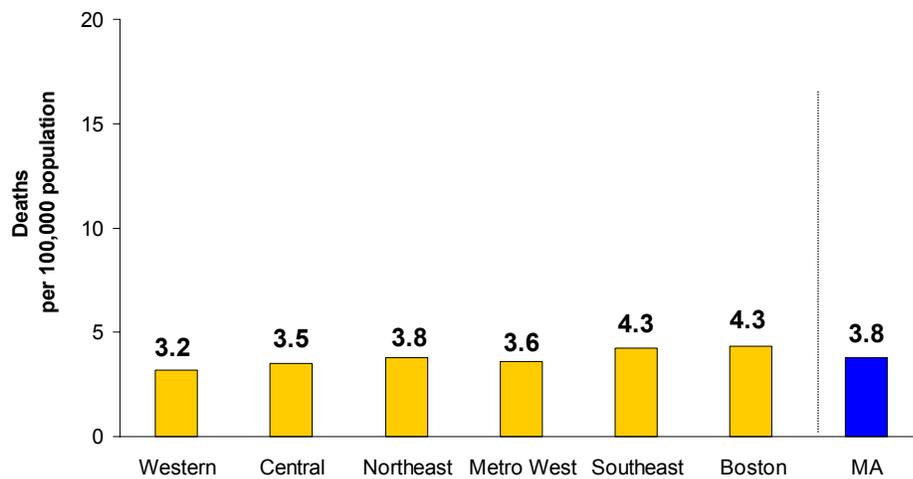


* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits

Fall-related Injury Mortality Rates by EOHHS Region, Massachusetts: 2003-2005

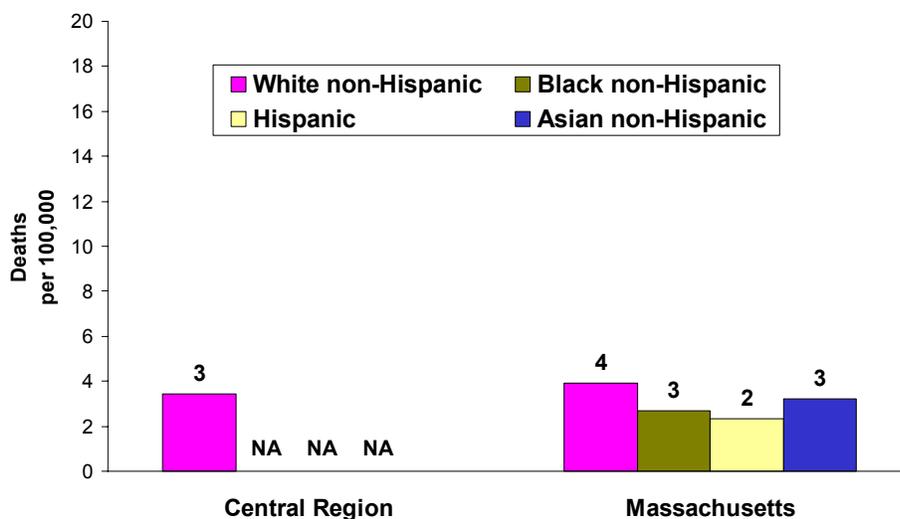
144



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.

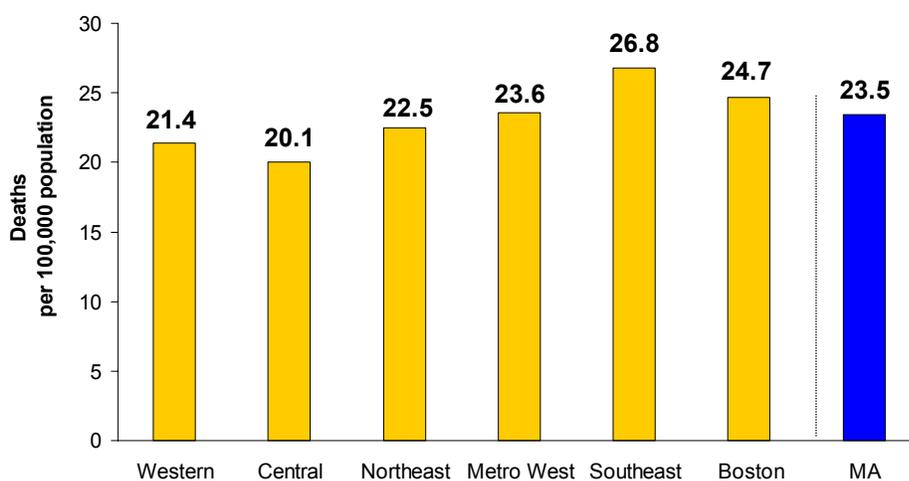
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Fall-related Injury Mortality Rates by Race/Ethnicity Central Region and Massachusetts: 2003-2005



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

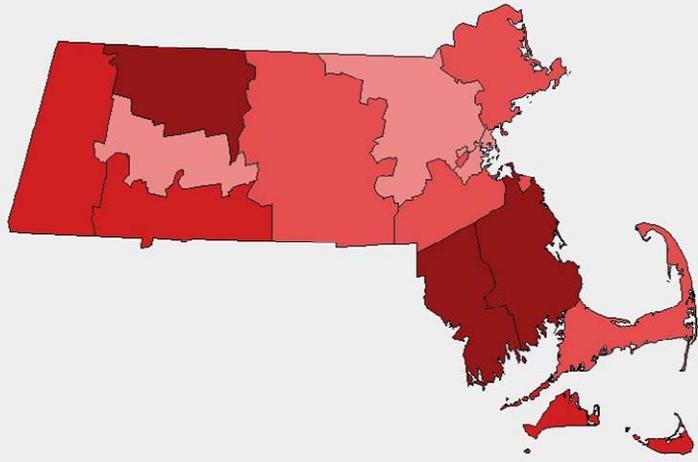
Fall-related Injury Mortality Rates Persons 65+ Years by EOHHS Region, Massachusetts: 2003-2005



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Work-related Injuries

Emergency Department Visits per 100 Full Time Equivalents.
Massachusetts Counties, 2004-2005

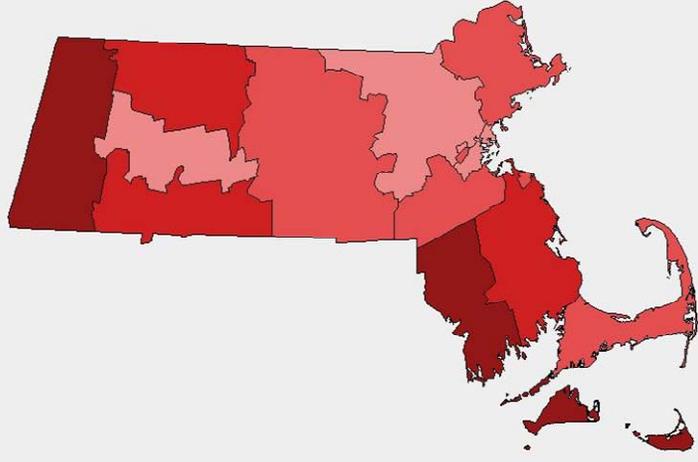


Work-related ED Visits/100 FTEs

1.00 - 1.45	1.64 - 2.87
2.89 - 3.11	3.51 - 3.93

Work-related Injuries among Teens

Emergency Department Visits per 100 Full Time Equivalents
Massachusetts Counties, 2004-2005

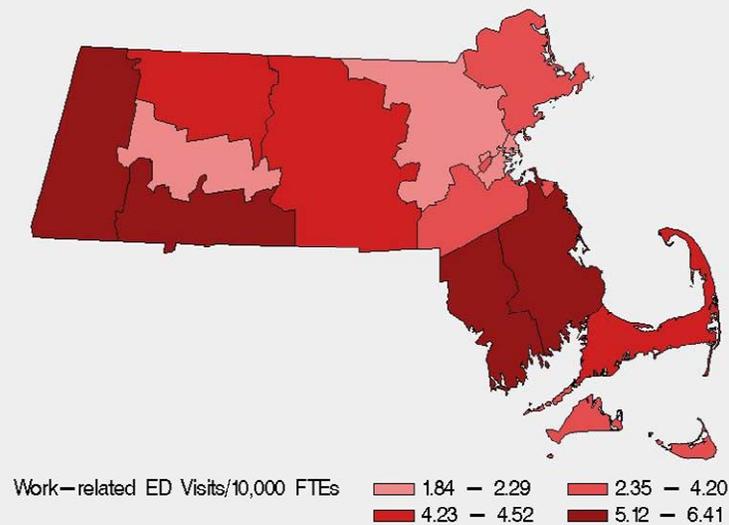


Work-related ED Visits/100 FTEs

0.53 - 1.72	2.13 - 3.98
4.99 - 5.53	6.33 - 8.19

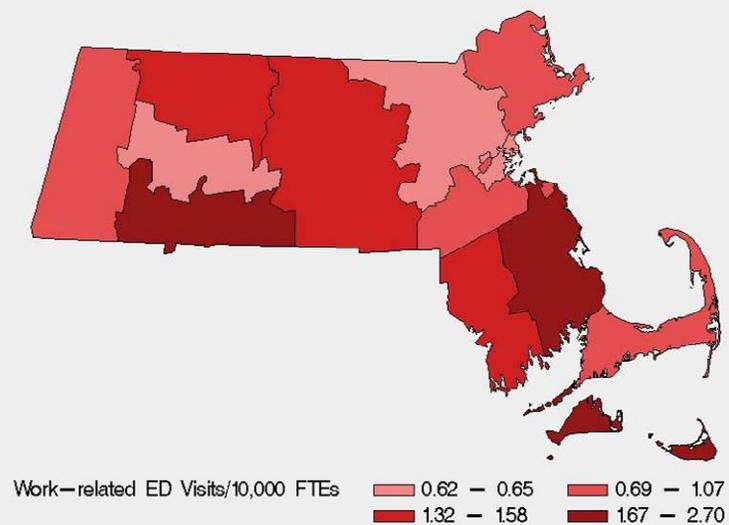
Work—related Burn Injuries

Emergency Department Visits per 10,000 Full Time Equivalents
Massachusetts Counties, 2004–2005



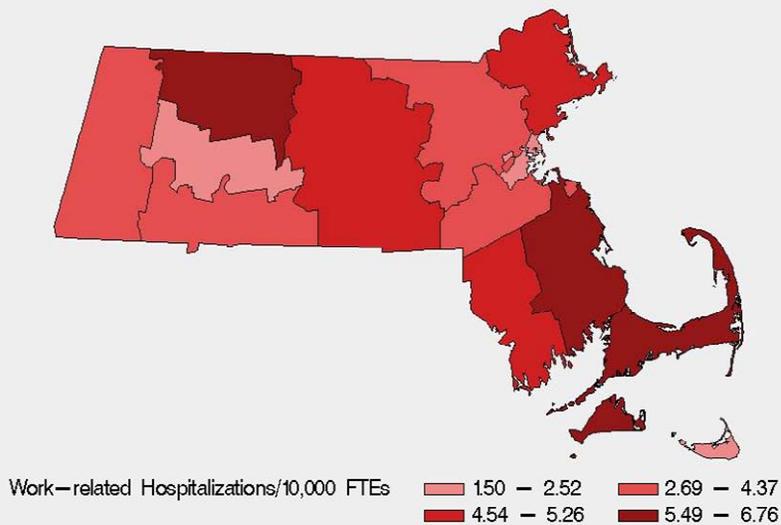
Work—related Amputations

Emergency Department Visits per 10,000 Full Time Equivalents
Massachusetts Counties, 2004–2005

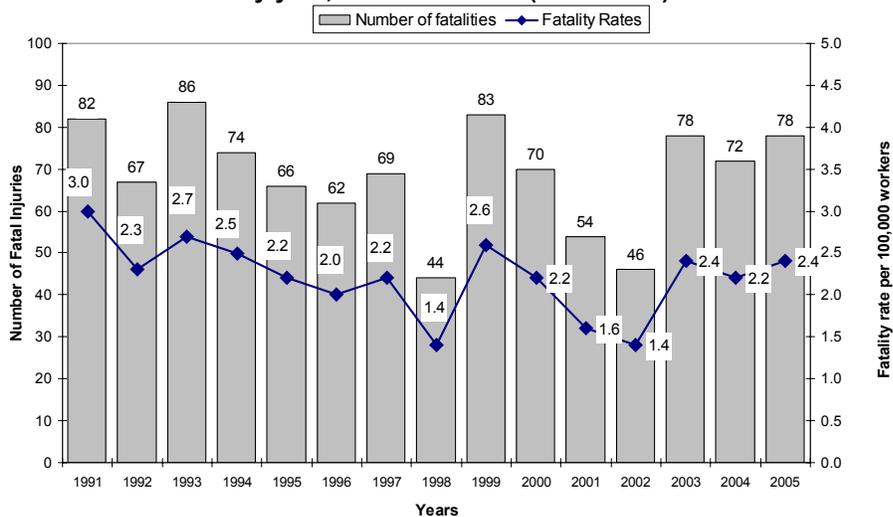


Work-related Injuries

Hospitalizations per 10,000 Full Time Equivalents.
Massachusetts Counties, 2004-2005



Number and Rate of Fatal Occupational Injuries by year, Massachusetts (1991- 2005)



Data Source: Census of Fatal Occupational Injuries (CFOI) 1991-2005, Occupational Health Surveillance Program, MA Dept. of Public Health. MA employment data from BLS Current Population Survey (1991 - 2005) was used to calculate rates.

Summary Injury/Violence Hospitalization Indicators by EOHS Regions, Massachusetts: 2003-2005

Hospital Discharge Indicator Rates (age-adjusted)	MA Total	Western	Central	North East	Metro West	South East	Boston
All Injuries	836	872	830	836	753	859	966
Fall-related injury hospitalizations	374	338	357	380	379	375	419
Traumatic Brain Injuries	80	93	97	82	65	73	94
Motor vehicle-related	77	93	91	73	57	88	74
Self-Inflicted	65	92	63	68	48	66	65
Assault	28	34	24	23	14	21	72

■ Better Outcome (significantly different from state) ■ Worse Outcome (significantly different from state)

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Summary Injury/Violence Emergency Department Indicators by EOHS Regions, Massachusetts: 2003-2005

Indicator Age-adjusted Rate per 100,00	MA Total	Western	Central	North East	Metro West	South East	Boston
ER Visit Rate for all Injuries	11,298	12,323	11,379	11,195	9,112	13,996	10,539
ER Visit Rate for Traumatic Brain Injury	604	461	646	662	563	653	640
ER Visit Rate for Firearm	7	13	5	6	2	8	13
ER Visit Rate for Fall-related injuries	2,750	2,913	2,860	2,713	2,410	3,191	2,511

■ Better Outcome (significantly different from state) ■ Worse Outcome (significantly different from state)

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Department Visits

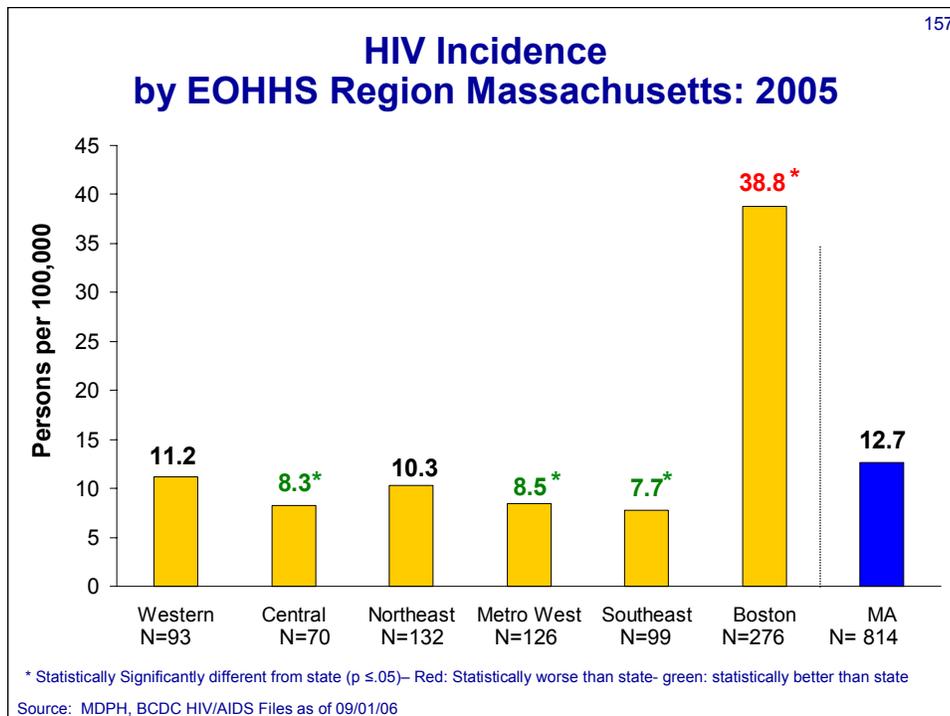
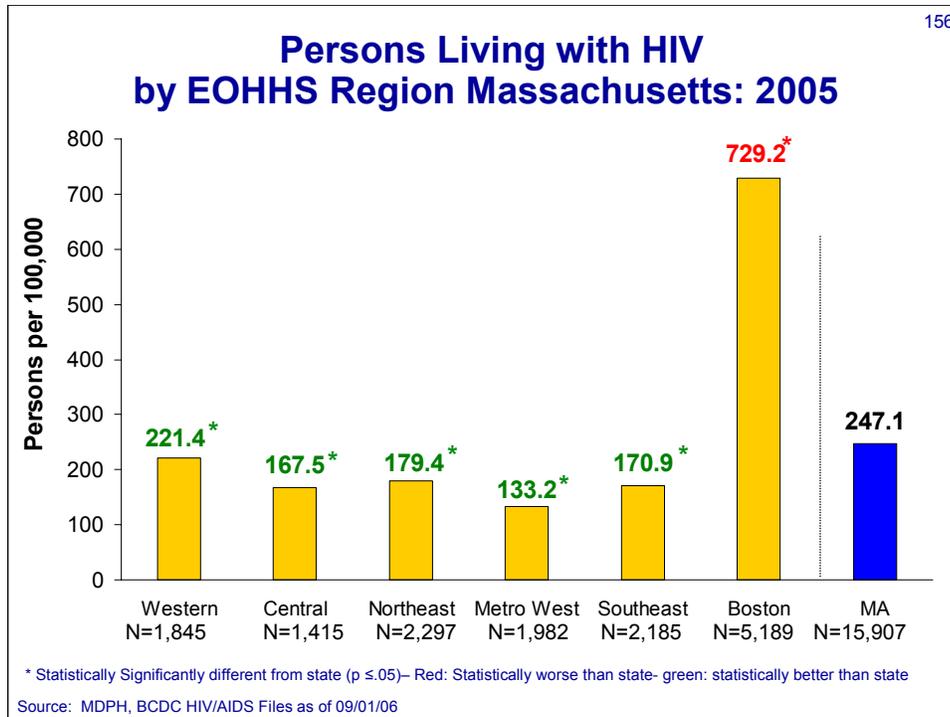
Summary Injury/Violence Mortality Indicators by EOHS Regions, Massachusetts: 2003-2005

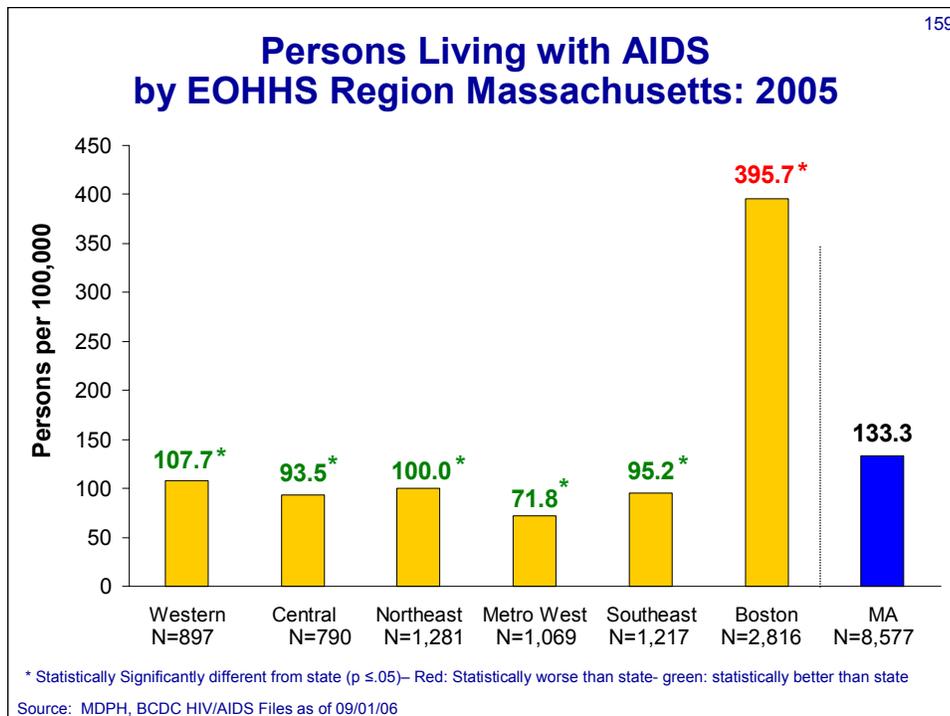
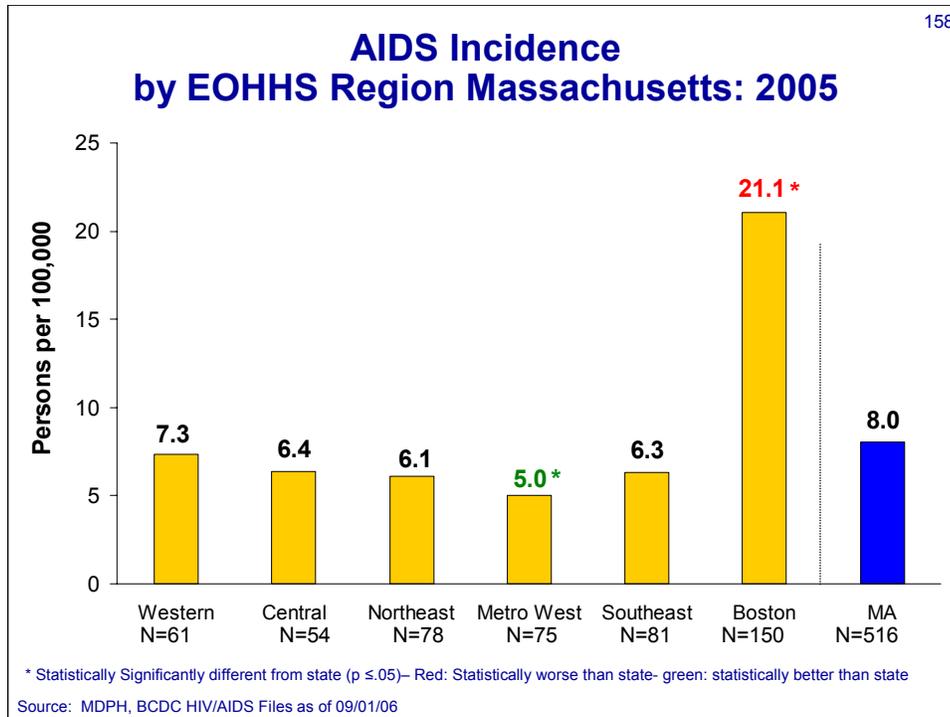
Mortality Indicator Age-adjusted Rate per 100,000	MA Total	Western	Central	North East	Metro West	South East	Boston
Homicide Death Rate	2.6	3.3	1.7	1.8	0.7	2.6	7.3
Suicide Death Rate	6.6	7.9	7.2	7.4	5.3	6.9	5.5
Motor Vehicle- related Death Rate	7.7	10.2	9.8	6.4	5.4	10.7	4.6
Firearm Death Rate	3.2	4.1	3.1	2.9	1.3	3.4	5.9
Fall-related Injury Death Rate	3.8	3.2	3.5	3.8	3.6	4.3	4.3

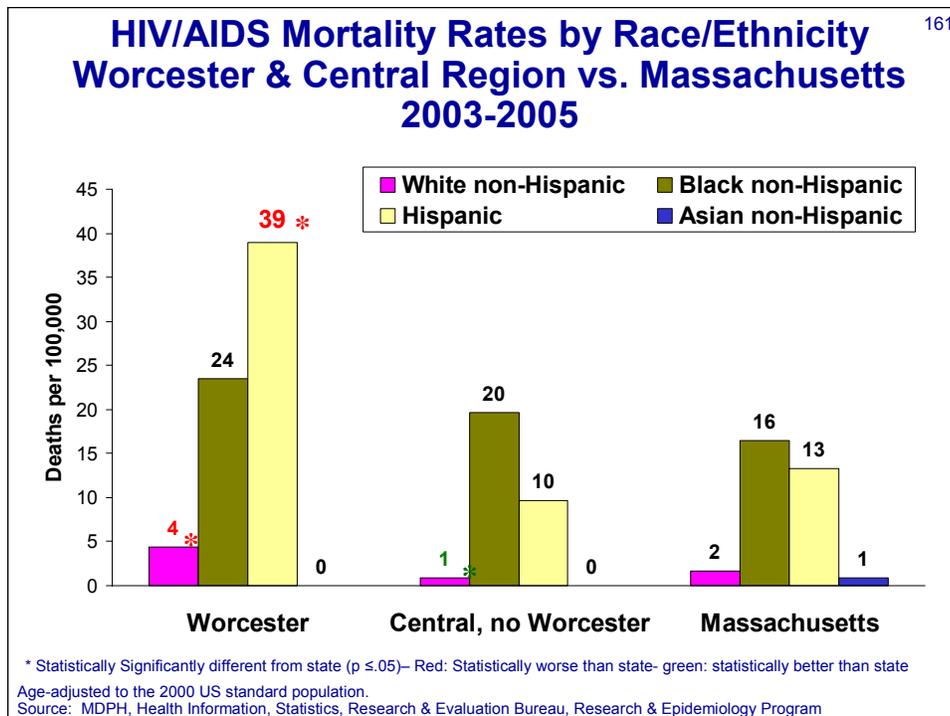
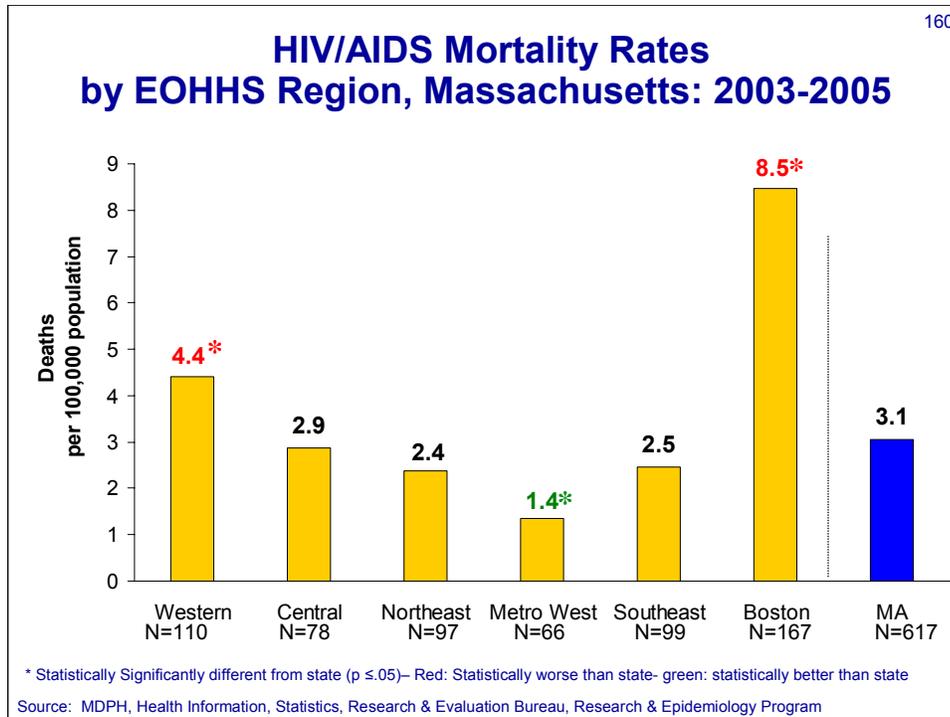
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

HIV/AIDS





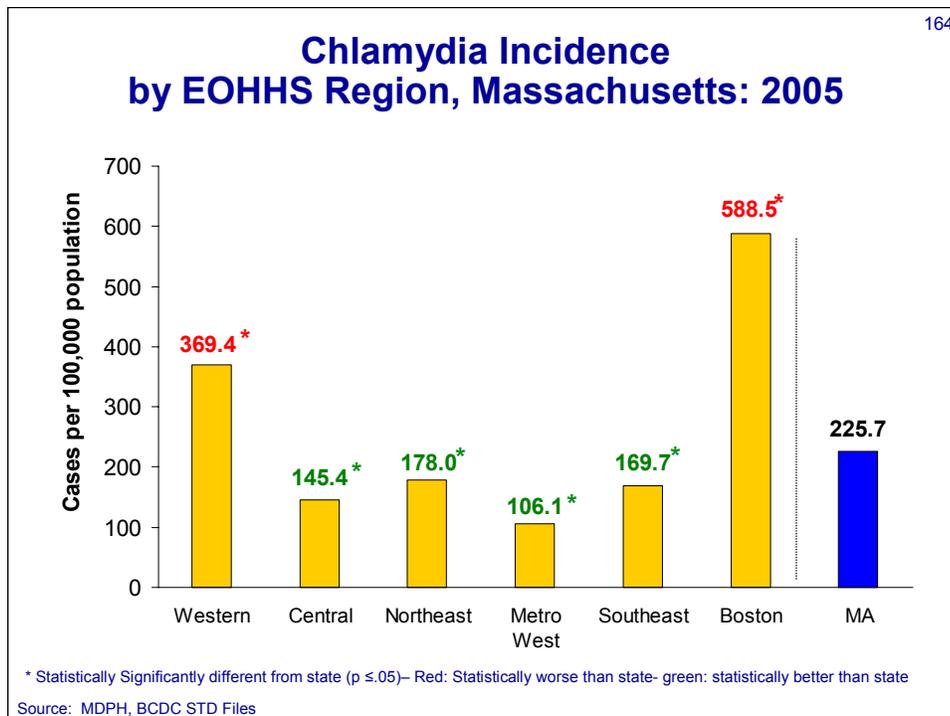
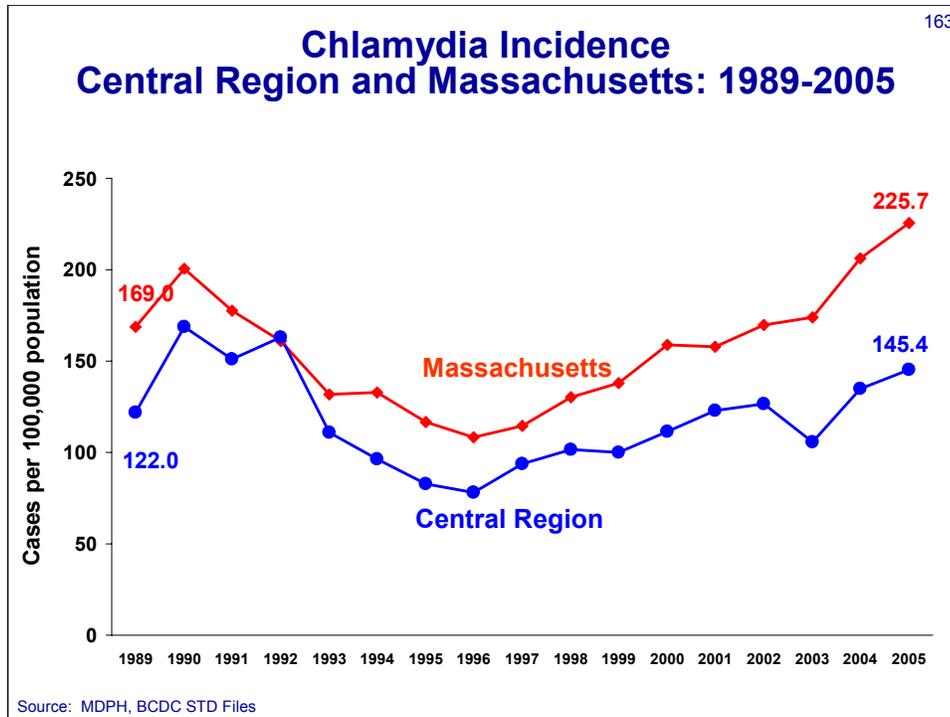


Summary HIV/AIDS Indicators by EOHHS Regions

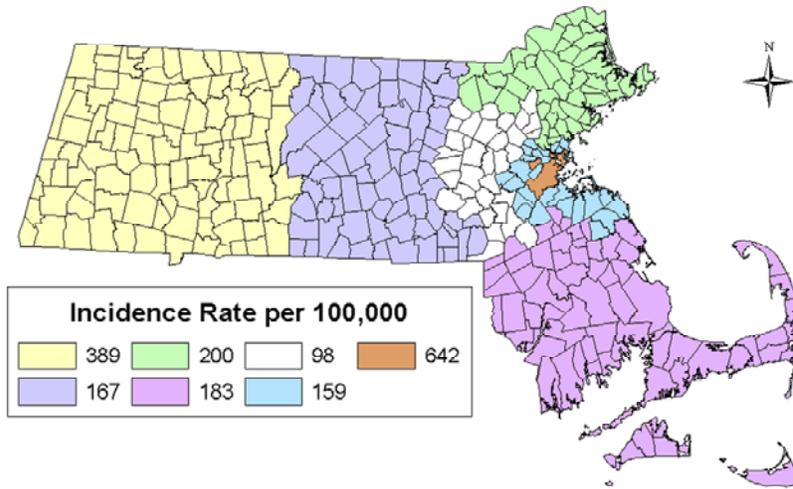
Indicator Crude rate, per 100,000	MA Total	Western	Central	North East	Metro West	South East	Boston
Persons living with HIV (2005)	247.1	221.4	167.5	179.4	133.1	170.9	729.2
HIV Incidence(2005)	12.6	11.2	8.3	10.3	8.5	7.7	38.8
Persons living with AIDS (2005)	133.2	107.7	93.5	100.0	71.8	95.2	395.7
AIDS Incidence (2005)	8.0	7.3	6.4	6.1	5.0	6.3	21.1
HIV/AIDS Mortality (2003-2005)	3.1	4.4	2.9	2.4	1.4	2.5	8.5

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

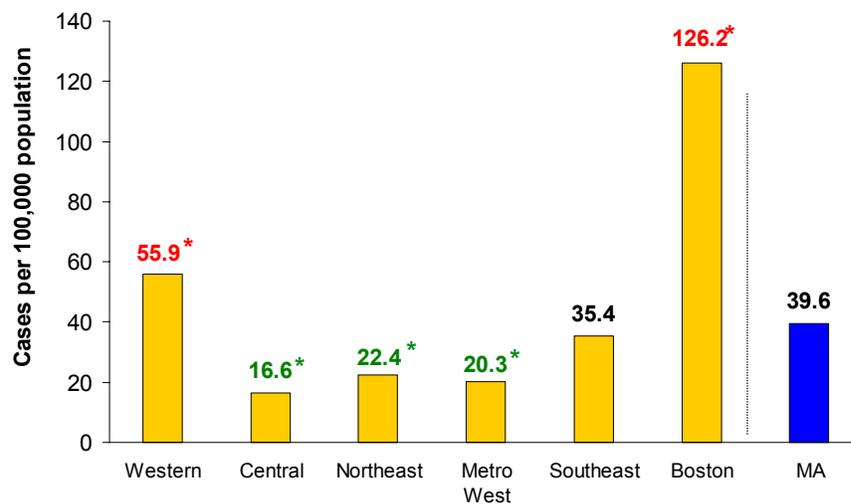
INFECTIOUS DISEASES



Chlamydia Incidence Rate by Emergency Preparation Region, 2006



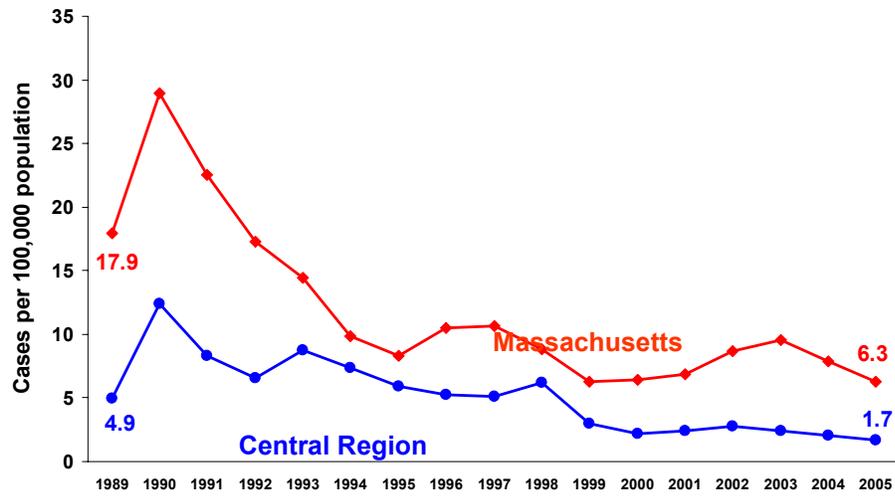
Gonorrhea Incidence by EOHHS Region, Massachusetts: 2005



* Statistically Significant different from state (p ≤ .05)– Red: Statistically worse than state- green: statistically better than state

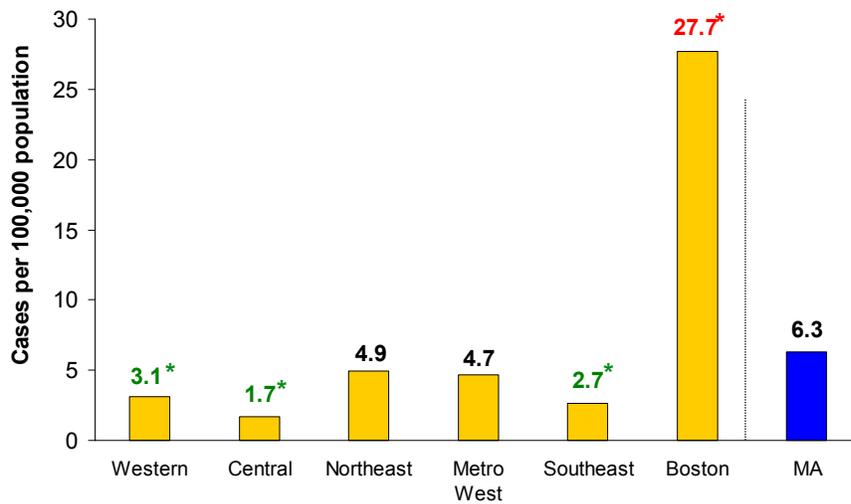
Source: MDPH, BCDC STD Files

Syphilis Incidence Central Region and Massachusetts: 1989-2005



Source: MDPH, BCDC STD Files

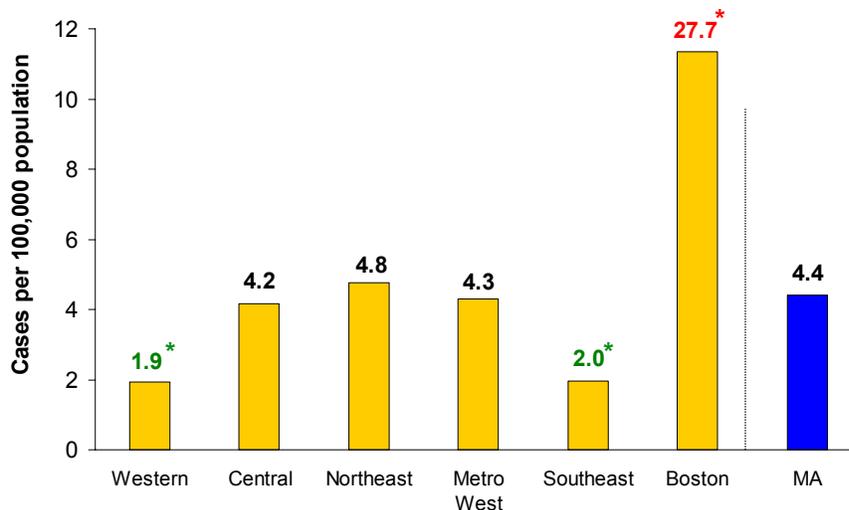
Syphilis Incidence by EOHHS Region Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state– green: statistically better than state

Source: MDPH, BCDC STD Files

Tuberculosis Incidence by EOHHS Region Massachusetts: 2004



* Statistically Significantly different from state ($p \leq .05$)— Red: Statistically worse than state— green: statistically better than state
Source: MDPH Bureau of Communicable Disease Control, ISIS

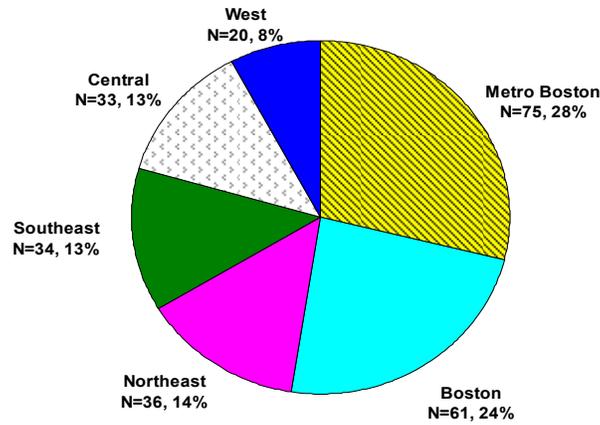
Confirmed Tuberculosis Cases by Race/Ethnicity and EOHHS Region Massachusetts: 2006

EOHHS Region	White non-Hispanic	Black non-Hispanic	Asian/Pacific Islander	Hispanic
West	<5	<5	8	<5
Central	<5	6	14	10
Northeast	5	6	19	6
Metro Boston	21	20	21	13
Boston	8	26	19	8
Southeast	14	9	<5	8

Source: MDPH Bureau of Communicable Disease Control, ISIS

Percent of Confirmed Tuberculosis Cases by EOHS Region Massachusetts: 2006 (N = 259)

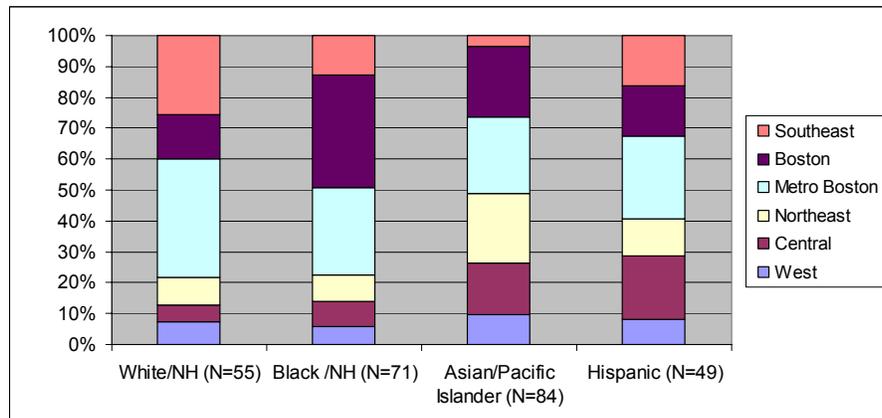
171



Source: MDPH Bureau of Communicable Disease Control, ISIS

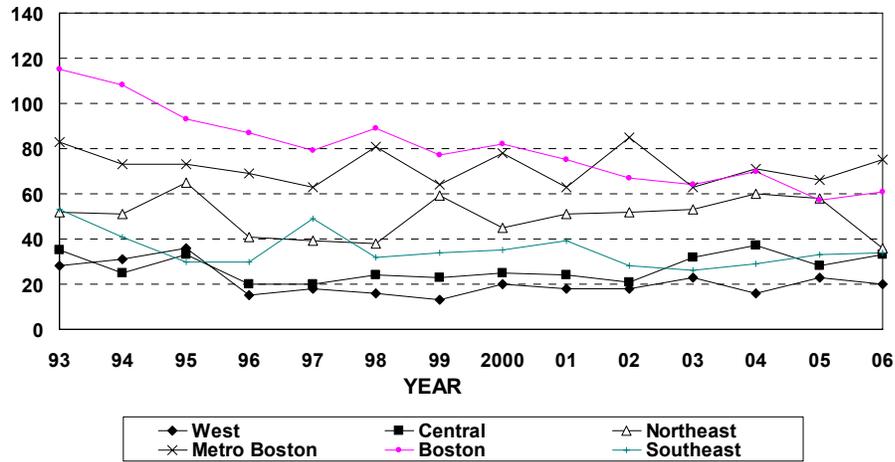
Percent of Confirmed Tuberculosis Cases by Race/Ethnicity and EOHS Region Massachusetts: 2006

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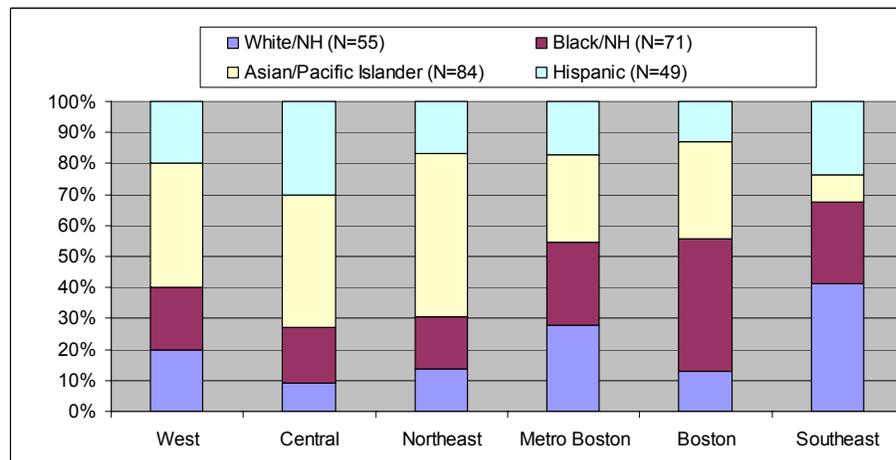
Source: MDPH Bureau of Communicable Disease Control, ISIS

Tuberculosis Cases by EOHHS Region Massachusetts: 1993-2006



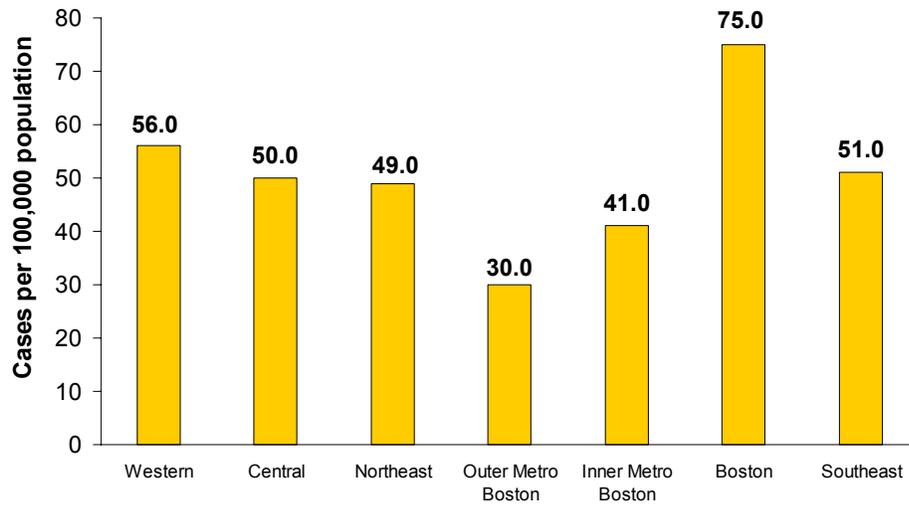
Source: MDPH Bureau of Communicable Disease Control, ISIS

Percent of Confirmed Tuberculosis Cases by Race/Ethnicity and EOHHS Region Massachusetts: 2006



Source: MDPH Bureau of Communicable Disease Control, ISIS

Hepatitis C Average Incidence Rates by EOHHHS Region, Massachusetts: 1992-2006¹



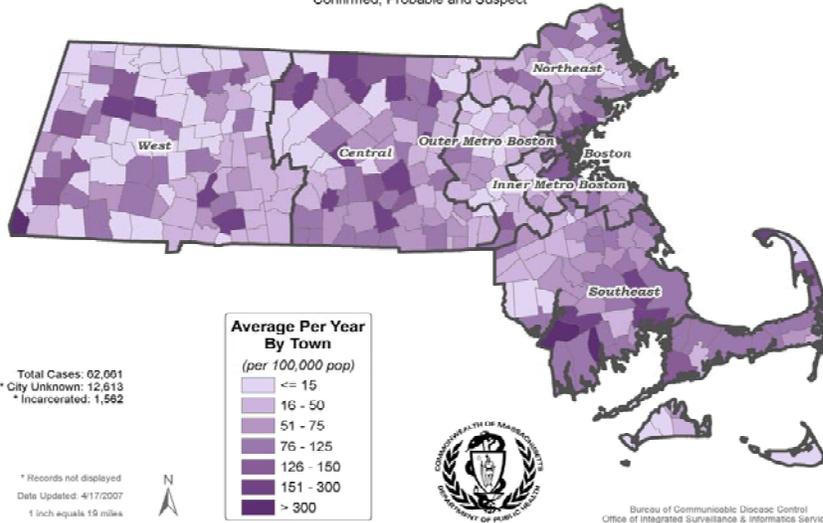
¹ Data as of March 17, 2007

* Statistically Significant different from state ($p \leq 0.05$)– Red: Statistically worse than state- green: statistically better than state

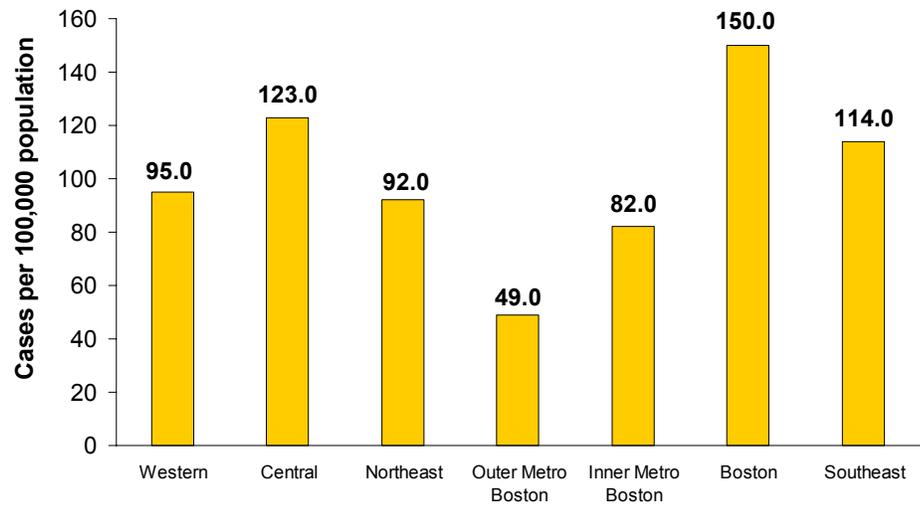
Source: MDPH Bureau of Communicable Disease Control, ISIS

Massachusetts Hepatitis C Infection Average per Year (per 100,000 pop) By Town (1992-2006)

Confirmed, Probable and Suspect



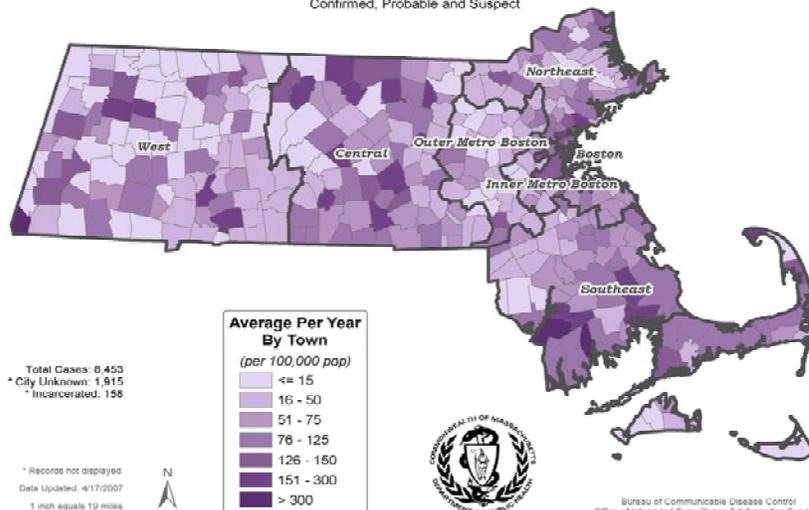
Hepatitis C Incidence Rates by EOHHS Region, Massachusetts: 2006

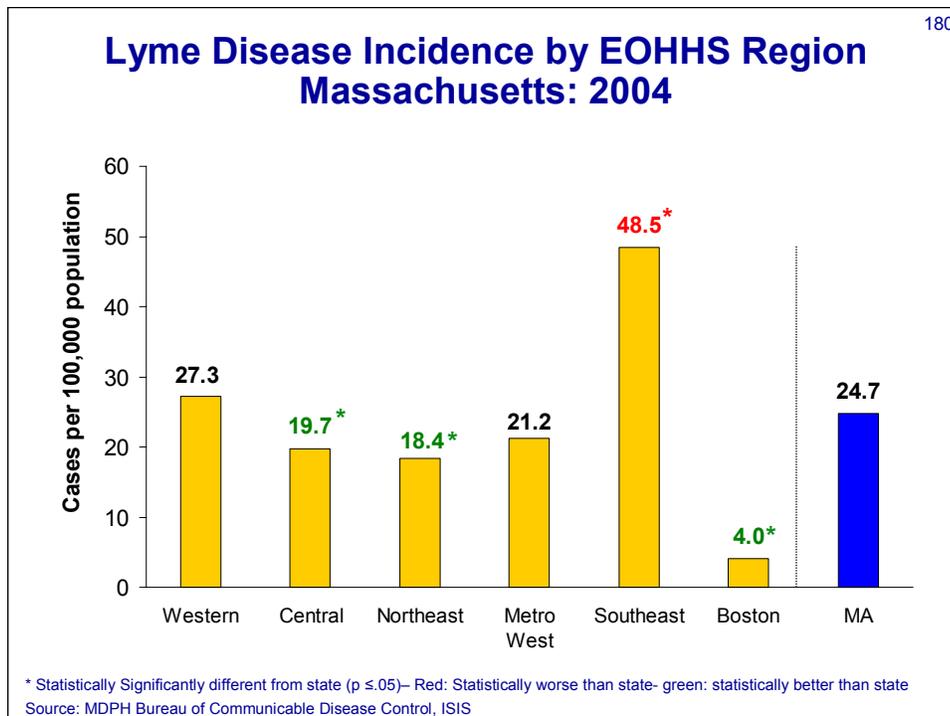
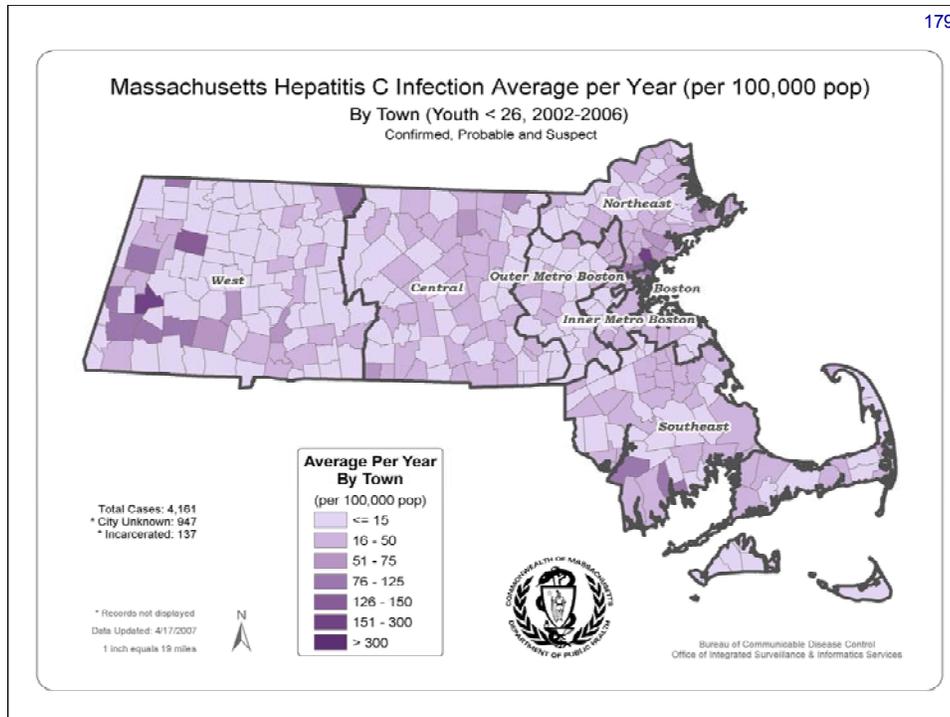


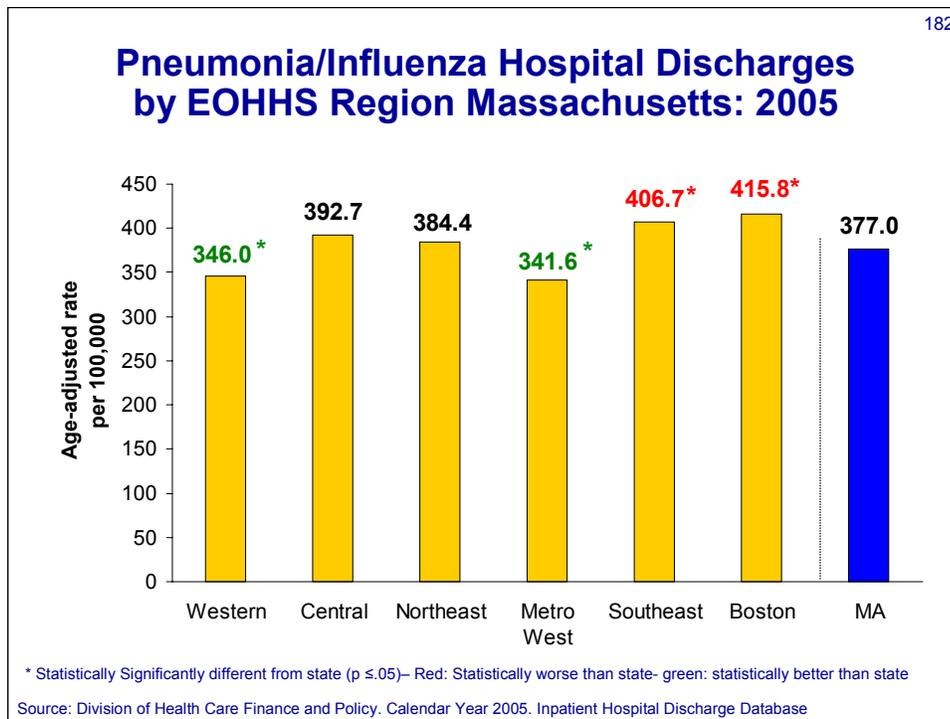
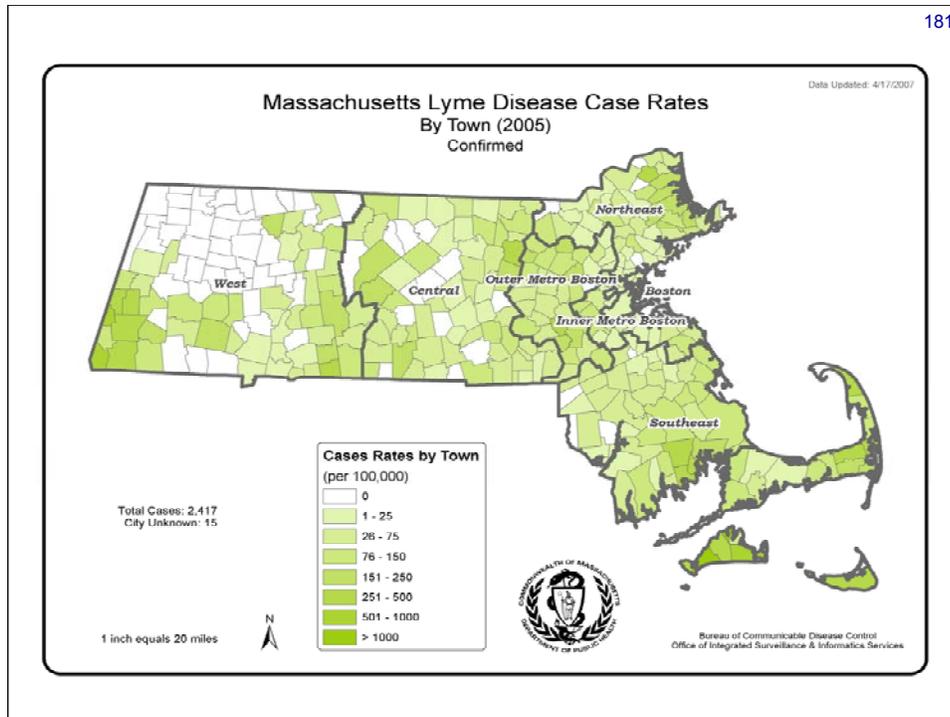
* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
 Source: MDPH Bureau of Communicable Disease Control, ISIS

Massachusetts Hepatitis C Infection Average per Year (per 100,000 pop) By Town (2006)

Confirmed, Probable and Suspect







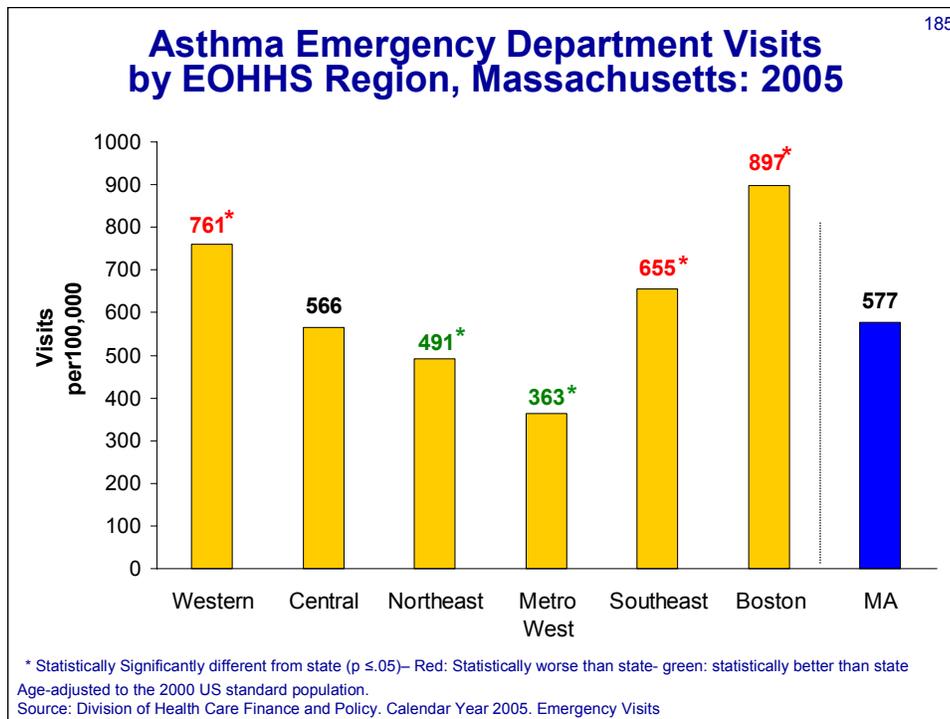
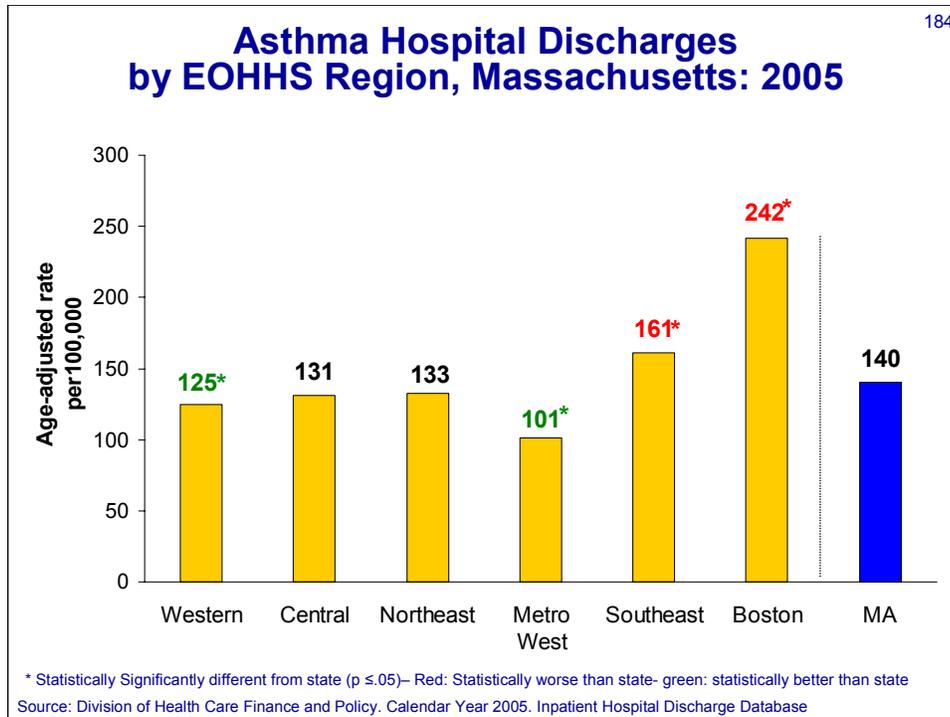
Summary Infectious Disease Indicators by EOHHS Regions

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Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Chlamydia Incidence (crude rates, 2005)	225.7	369.4	145.4	178.0	106.1	169.7	588.5
Gonorrhea Incidence (crude rates, 2005)	39.6	55.9	16.6	22.4	20.3	35.4	126.2
Syphilis Incidence (crude rates, 2005)	6.3	3.1	1.7	4.9	4.7	2.7	22.7
Tuberculosis Incidence (crude rates, 2004)	4.4	1.9	4.2	4.8	4.3	2.0	11.4
Lyme Disease Incidence (crude rates, 2004)	24.7	27.3	19.7	18.4	21.2	48.4	4.0
Pneumonia/ Influenza Hospital Discharges (age-adjusted, 2005)	377.0	346.0	392.7	384.4	341.5	406.7	415.8

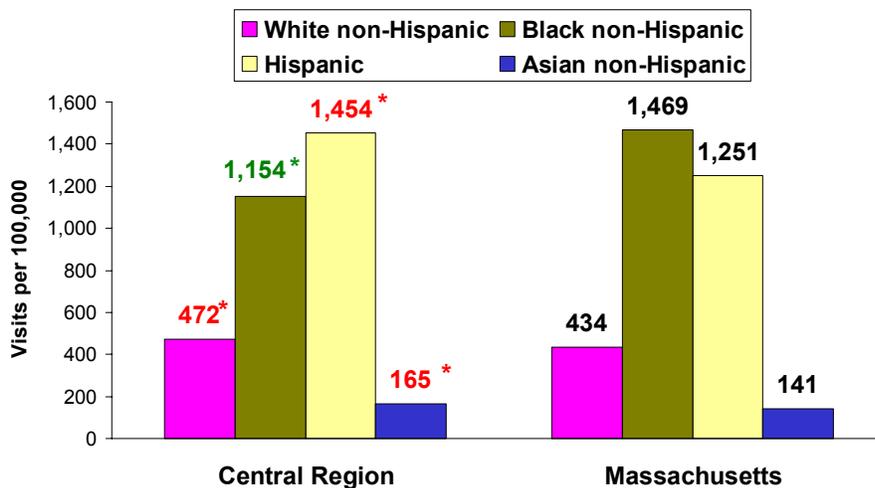
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

ASTHMA



Emergency Department Visit Rates for Asthma by Race/Ethnicity Central Region and Massachusetts: 2005

186

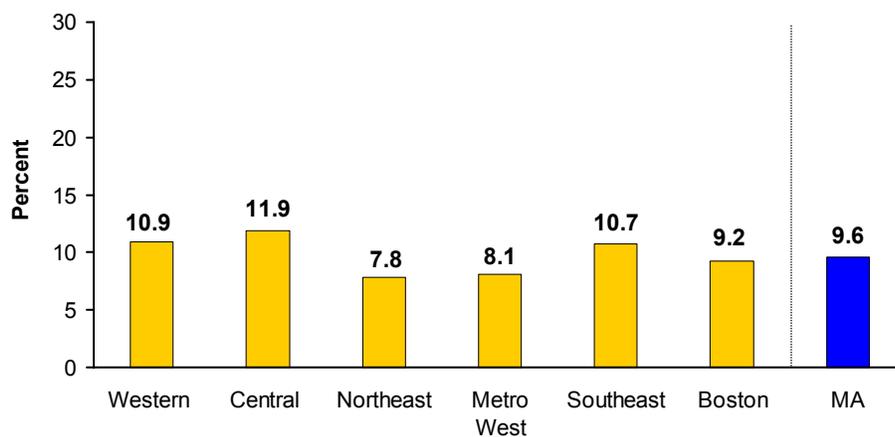


* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Visits

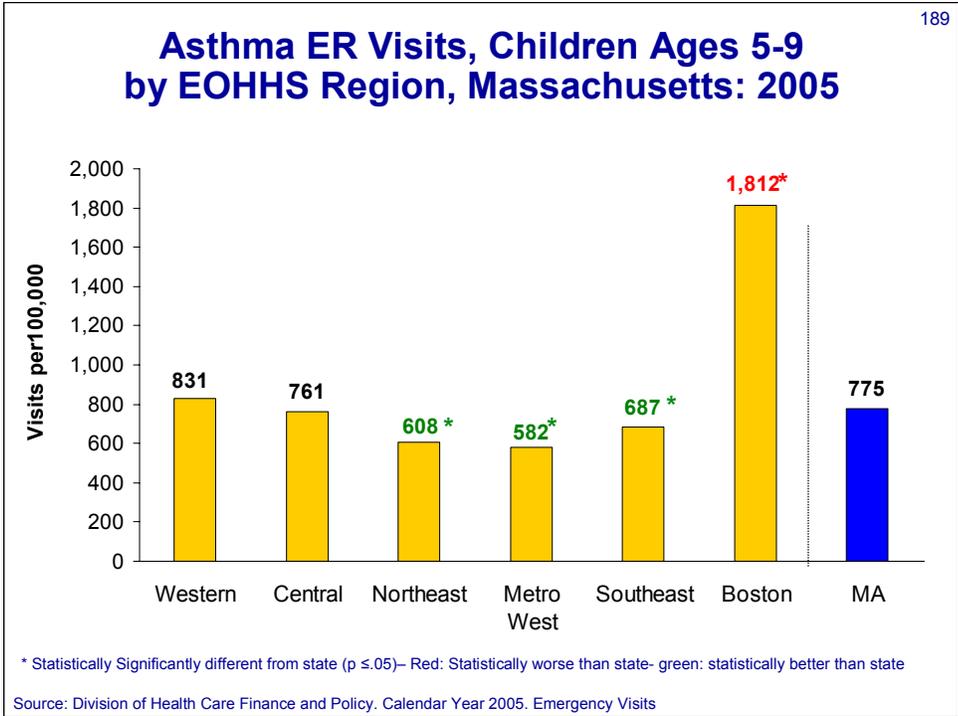
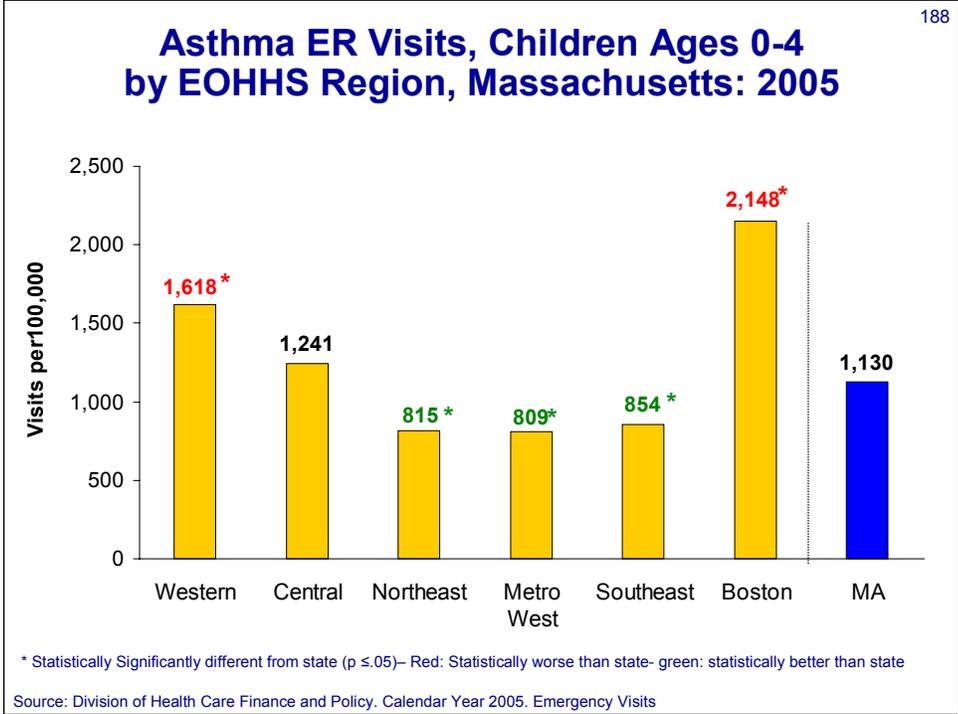
Adults who Currently have Asthma by EOHHS Region, Massachusetts: 2005

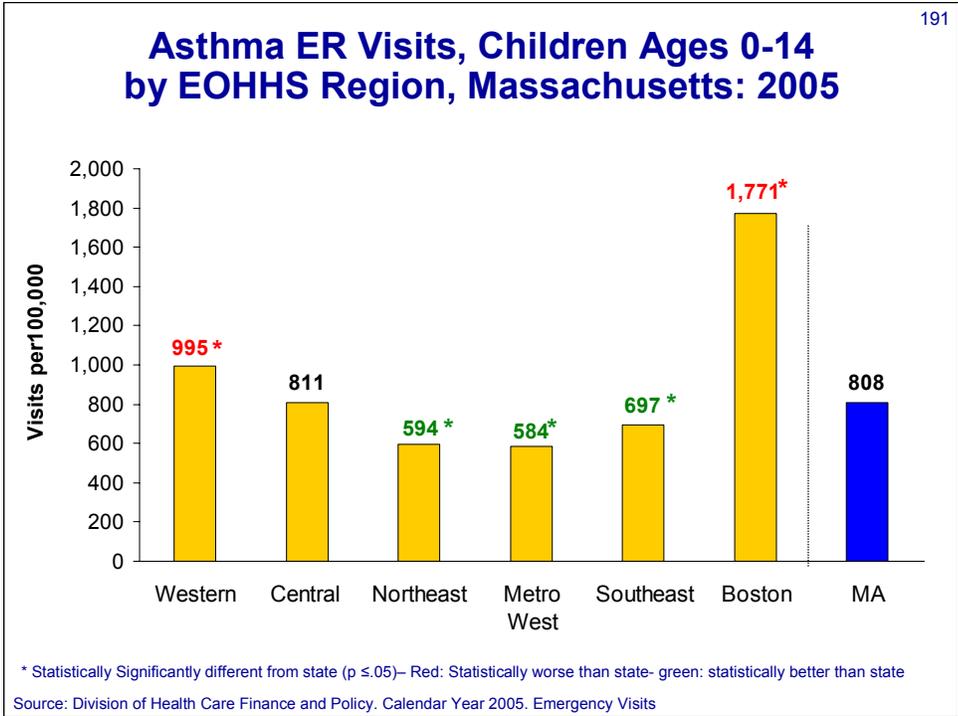
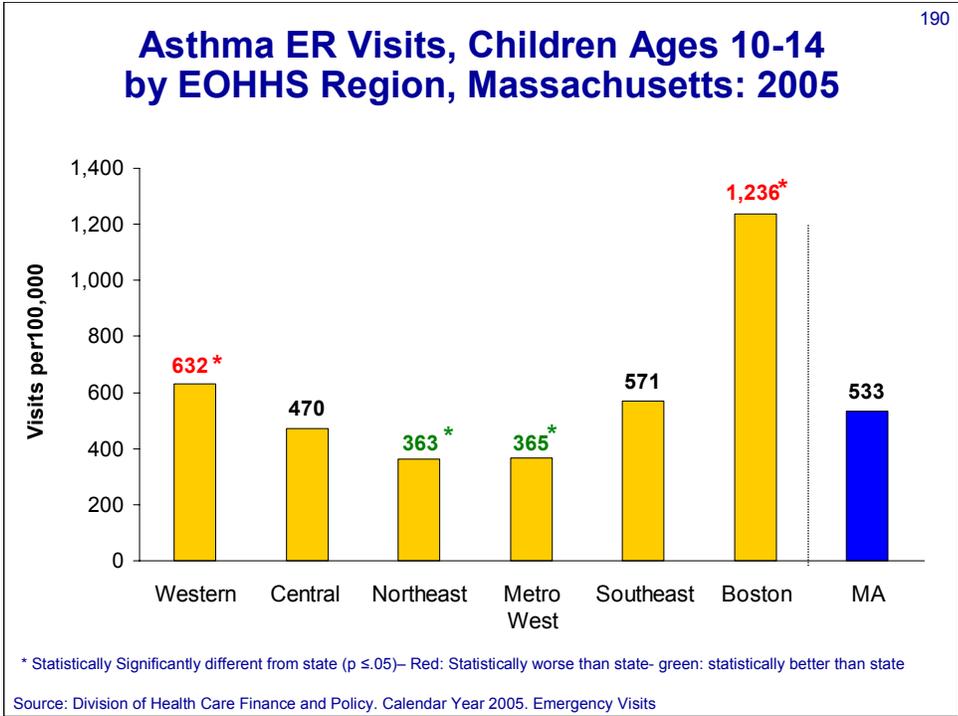
187



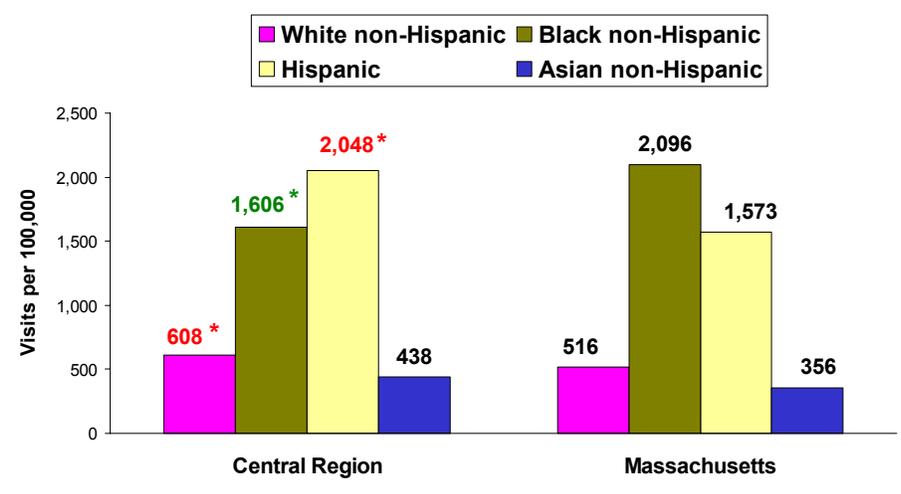
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program



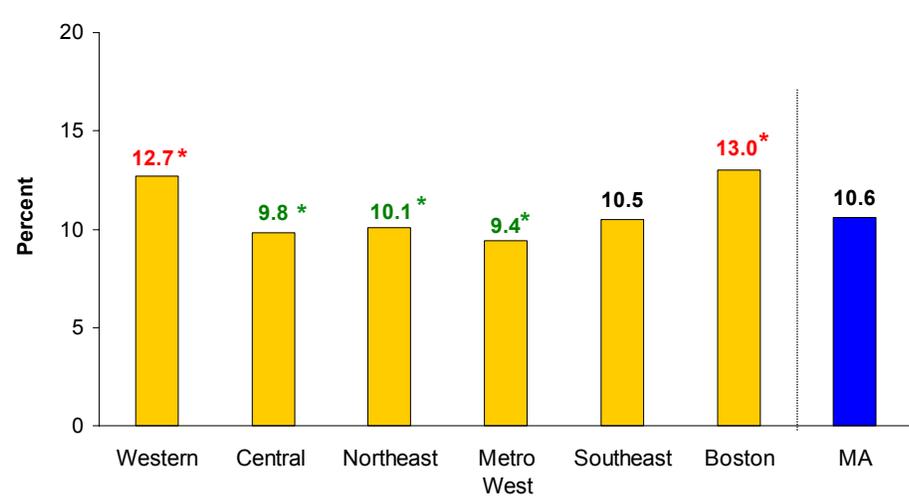


Asthma Emergency Department Visit Rates Children Ages 0-14 Central Region and Massachusetts: 2005



* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Visits

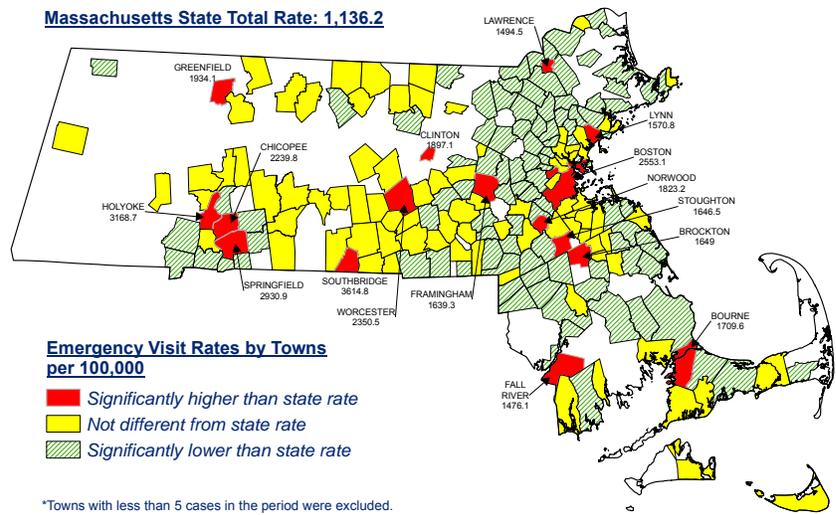
Pediatric Asthma Prevalence by EOHHS Region, Massachusetts: 2005-2006



* Statistically Significantly different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Center for Environmental Health, Pediatric Asthma Surveillance (2005-2006)

Pediatric Asthma Emergency Visit Rates by Towns* Among Children Ages <5 Massachusetts 2004-2005

Massachusetts State Total Rate: 1,136.2



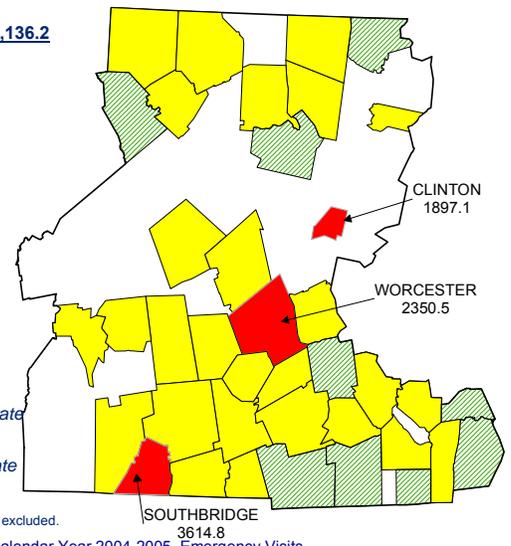
Source: Division of Health Care Finance and Policy. Calendar Year 2004-2005. Emergency Visits

Pediatric Asthma Emergency Visit Rates by Towns* Among Children Ages <5 Central Region, Massachusetts 2004-2005

Massachusetts State Total Rate: 1,136.2

Emergency Visit Rates by Towns per 100,000

- Significantly higher than state rate
- Not different from state rate
- Significantly lower than state rate



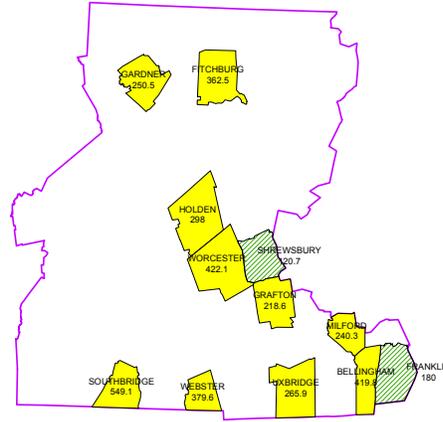
Source: Division of Health Care Finance and Policy. Calendar Year 2004-2005. Emergency Visits

Pediatric Asthma Hospitalization Rates by Towns* Among Children Ages <5 Central Region, Massachusetts 2004-2005

Massachusetts State Total Rate: 337.5

**Hospitalization Rates by Towns
per 100,000**

- Significantly higher than state rate
- Not different from state rate
- Significantly lower than state rate



*Towns with less than 5 cases in the period were excluded.

Source: Division of Health Care Finance and Policy. Calendar Year 2004-2005. Hospital Discharges

Summary Asthma Indicators by EOHHS Regions, Massachusetts: 2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Asthma Hospital Discharges (age-adjusted per100,000)	140.1	125.0	131.5	132.7	100.9	160.9	241.9
Asthma ER Visits (age-adjusted per100,000)	576.9	760.9	565.9	491.4	363.0	654.5	897.1
% Adults who currently have asthma (2005)	9.6	10.9	11.9	7.8	8.1	10.7	9.2
Asthma ER Visits Ages 0-14 (age-adjusted per100,000)	808	995	811	594	584	697	1,771

■ Better Outcome (significantly different from state) ■ Worse Outcome (significantly different from state)

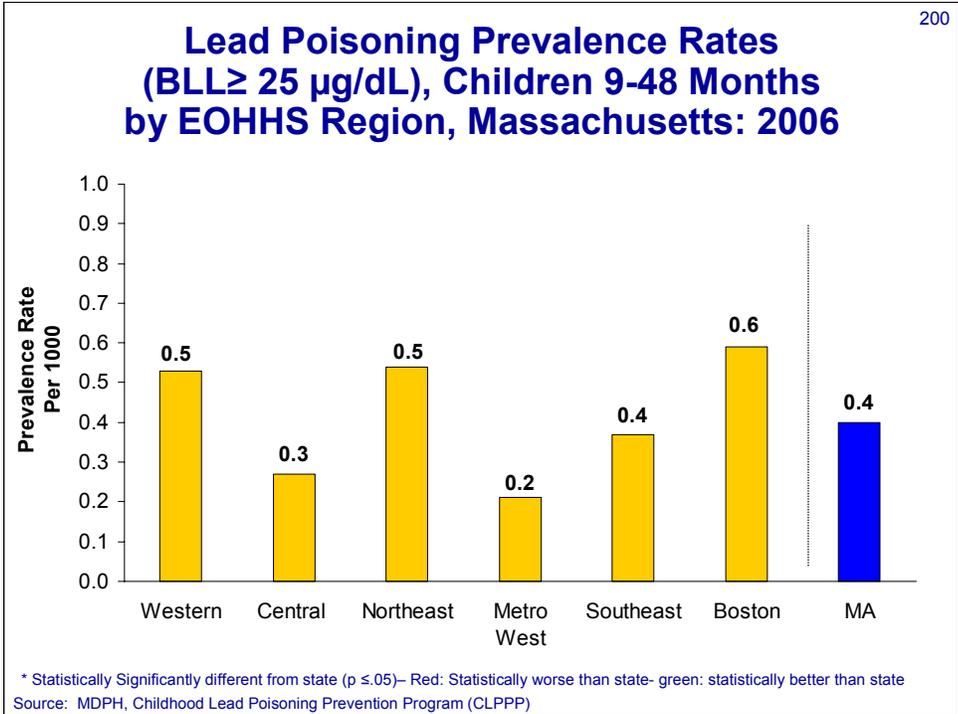
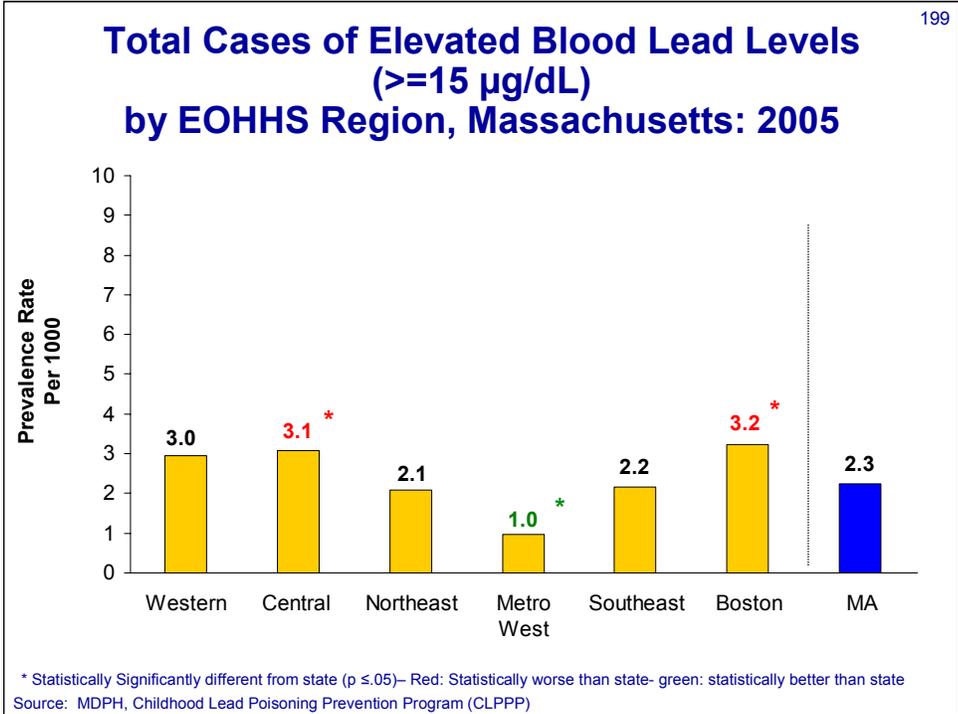
Summary Asthma Indicators by EOHHHS Regions, Massachusetts: 2005

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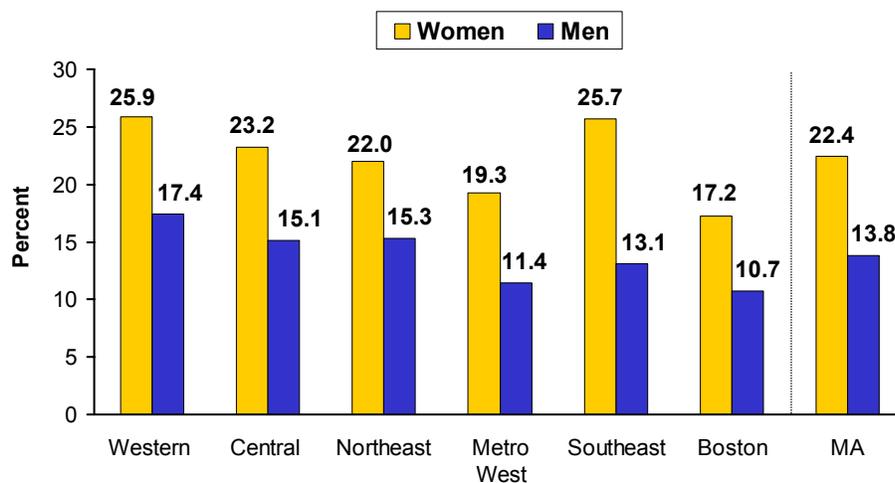
Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
Asthma ER Visits Ages 0-4 (age adjusted per100,000)	1,130	1,618	1,241	815	809	854	2,148
Asthma ER Visits Ages 5-9 (age adjusted per100,000)	775	831	761	608	582	687	1,812
Asthma ER Visits Ages 10-14 (age adjusted per100,000)	533	632	470	363	365	571	1,236
Pediatric Asthma Prevalence (2005-2006)	10.6	12.7	9.8	10.1	9.4	10.5	13.0

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

OTHER HEALTH INDICATORS

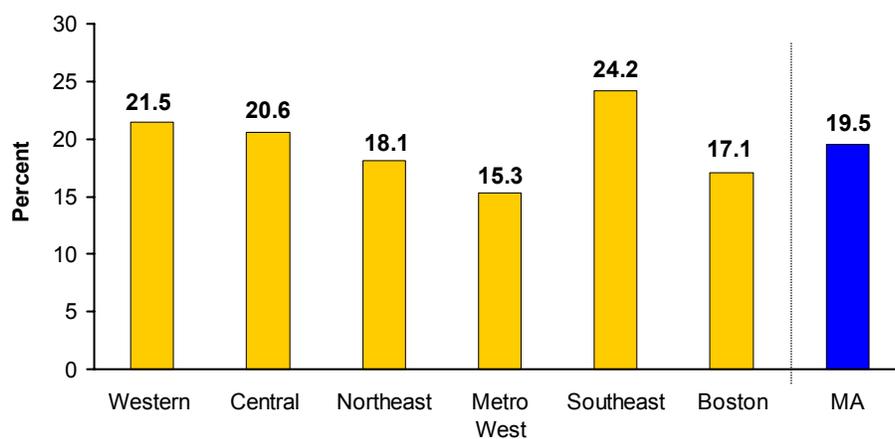


Adults who Report Experiencing Intimate Partner Violence by Gender and EOHHS Region Massachusetts: 2005



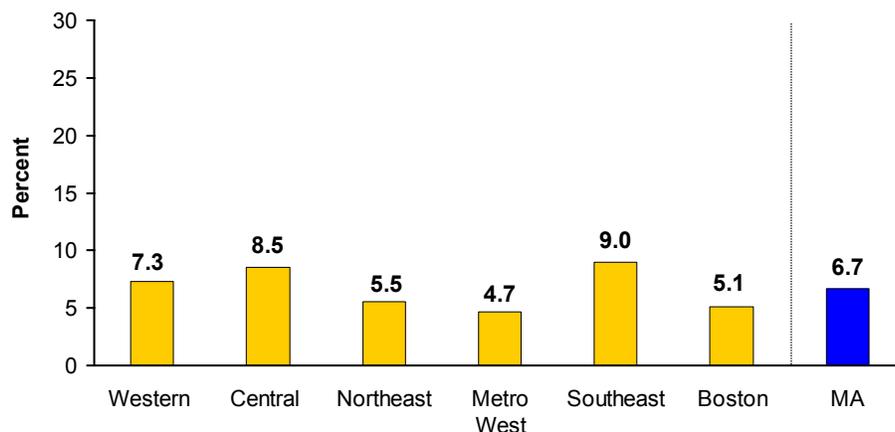
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Report Having a Disability by EOHHS Region, Massachusetts: 2005



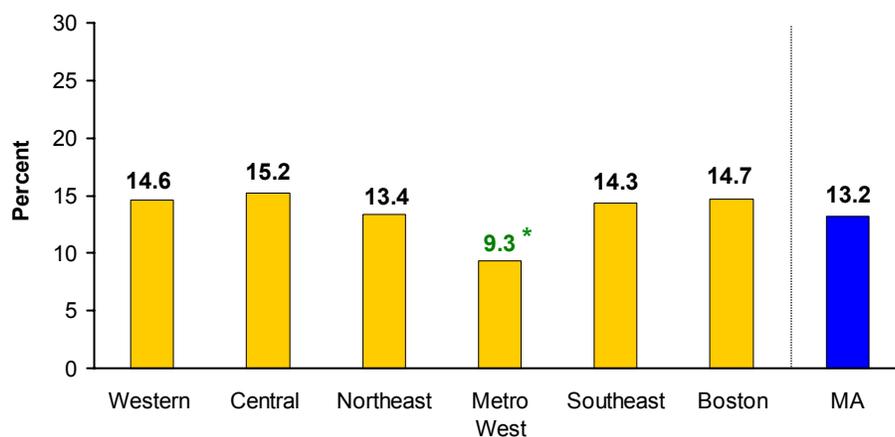
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Report Having a Disability and needing help with activities EOHHS Region, Massachusetts: 2005



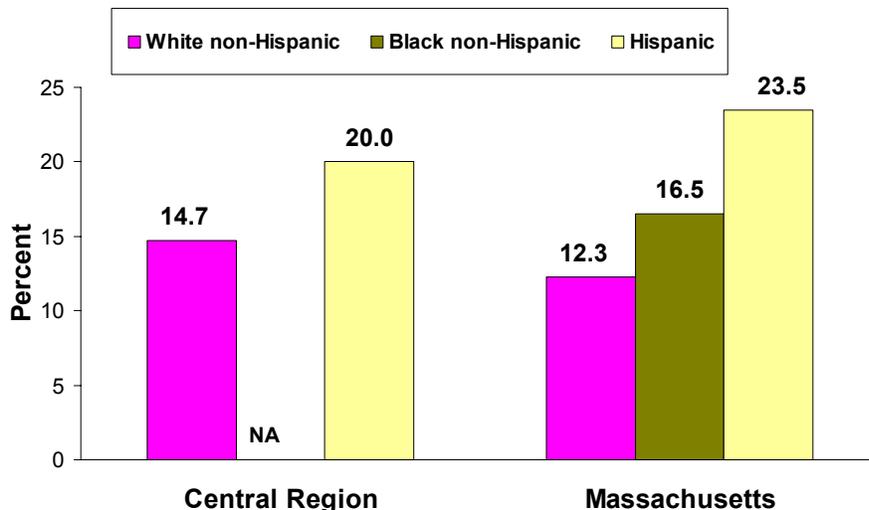
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults with Fair or Poor Health by EOHHS Region, Massachusetts: 2005



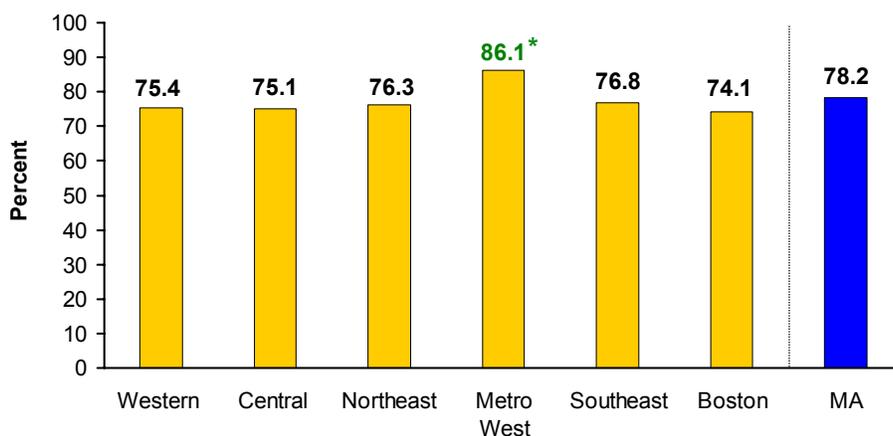
* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Reported Fair or Poor Health by Race and Ethnicity Central Region and Massachusetts: 2005



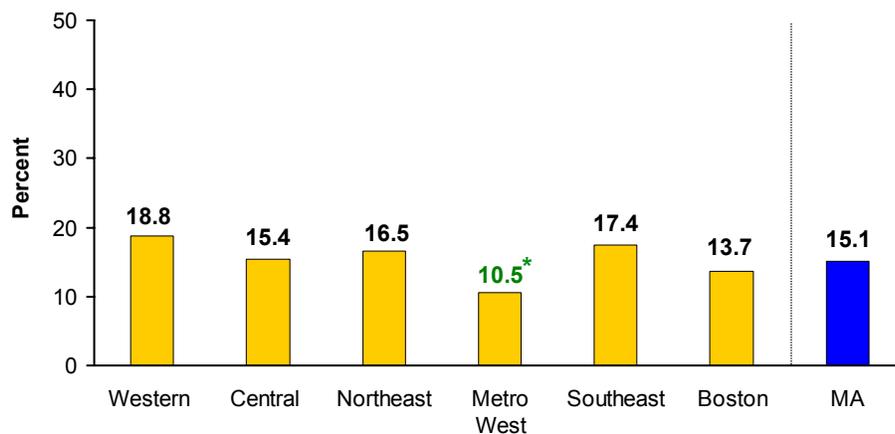
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Visited a Dentist in Past Year by EOHHS Region, Massachusetts: 2004



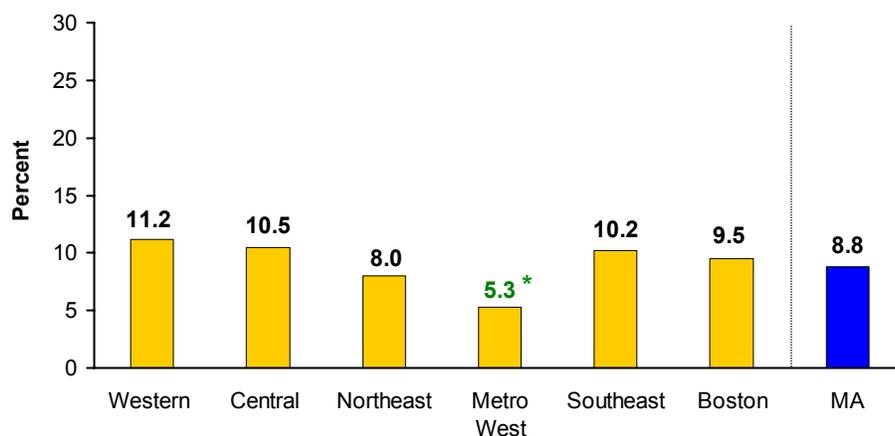
* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults who Have Lost 6 or More Teeth to Decay or Disease by EOHHS Region, Massachusetts: 2004



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Adults with Poor Mental Health for 15+ days in Past Month by EOHHS Region, Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$)— Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Summary Other Health Indicators by EOHHS Regions

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Fair or Poor Health (2005)	13.2	14.6	15.2	13.4	9.3	14.3	14.7
Cases of Elevated Blood Lead levels (Percent of All Children Screened Per 1000, 2005)	2.3	2.9	3.1	2.1	1.0	2.2	3.2
% Visited Dentist Past Year (2004)	78.2	75.4	75.1	76.3	86.1	76.8	74.1
% 6+ Teeth Missing (2004)	15.1	18.8	15.4	16.5	10.5	17.4	13.7
% Poor Mental Health for 15 or more days in Past Month (2005)	8.8	11.2	10.5	8.0	5.3	10.2	9.5

 Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Summary Other Health Indicators by EOHHS Regions

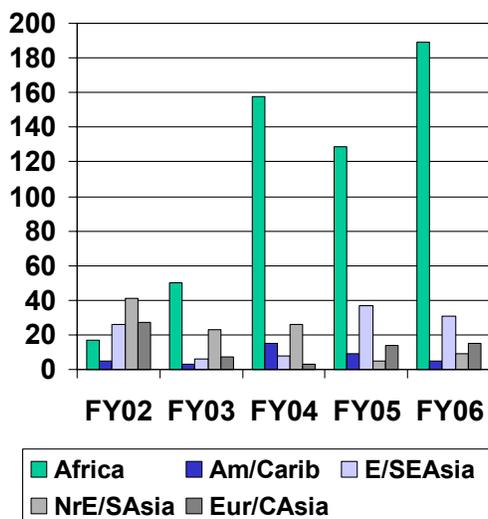
Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Adults reporting having a disability (2005)	19.5	21.5	20.6	18.1	15.3	24.2	17.1
% Adults reporting having a disability and needing help with activities (2005)	6.7	7.3	8.5	5.5	4.7	9.0	5.1

 Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Refugee Arrivals: Central Region Fiscal Year 2002-2006

- 858 refugees resettled over 5 years
- Increasing diversity in population
- 51% age <19 at arrival
- Nearly all resettlement is in Worcester



Source: MDPH, BCDC STD Files

Refugee Health Concerns: Central Region Fiscal Year 2002-2006

- High rates of latent TB infection (LTBI)
 - 744 refugees tested: 33% positive
 - Intensive follow-up in partnership with TB clinics, local health and DPH to assure testing, evaluation and treatment
 - Rapid assessment identifies active disease early to prevent spread
- Risk of lead poisoning among refugee children
 - 10 refugee children identified with elevated blood lead levels at arrival
 - Poor nutritional status puts children at risk of increased absorption of lead post-resettlement
- Need for bilingual, bicultural services to promote access to care

Source: MDPH, BCDC STD Files

Summary Refugees by EOHHS Regions Massachusetts: 2002-2006

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Indicator	Western	Central	North East	Metro West and Boston Regions
Refugee Arrivals	2,204	858	1,312	2,843
Largest Group	European and Central Asian	African	African and South East Asian	African
% refugees 19 years or less	44%	51%	45%	39%
Largest Cities	Greenfield, Springfield, West Springfield, Westfield	Worcester	Lowell, Lynn, Malden	Boston, Cambridge, Chelsea, Everett, Quincy, Revere, Somerville, Waltham
%TB Positive	41%	33%	44%	47%

Source: MDPH, BCDC STD Files

Premature Mortality Rate (PMR)¹

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- **Definition**
 - deaths before age 75

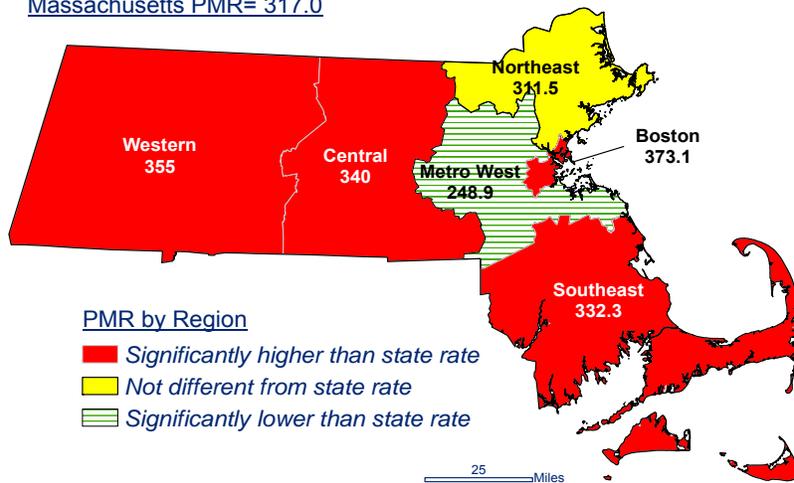
- **Rationale**
 - two-thirds of deaths to persons ages 75+
 - vast majority of deaths to persons age 75+ are due to chronic conditions associated with aging
 - deaths to persons less than 75 years may be more preventable

- **Summary health statistic**
 - excellent measure to reflect the health status of a population
 - used as a health status indicator that can be used to focus prevention initiatives and target programs

¹ Rates are per 100,000 population. Age-adjusted to the 2000 US standard population under 75 years of age.
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau

Premature Mortality Rates (PMR) by Region Massachusetts: 2005

Massachusetts PMR= 317.0



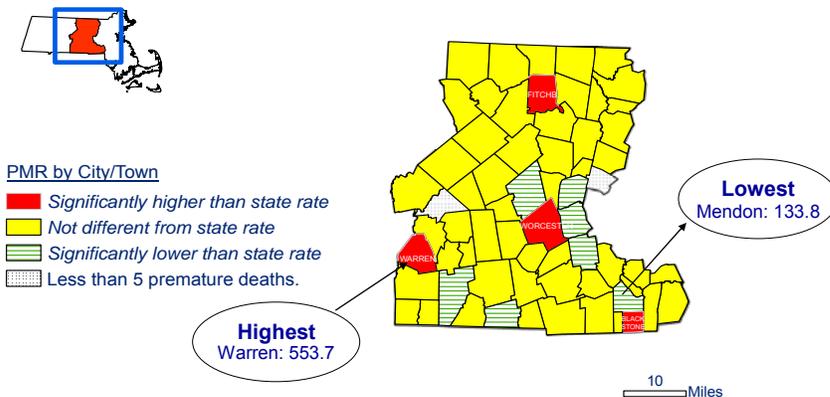
Rates are per 100,000 persons under 75 years of age, age-adjusted to the 2000 US standard population under 75 years of age.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

PMR- Central Region by City/Town Massachusetts: 2005

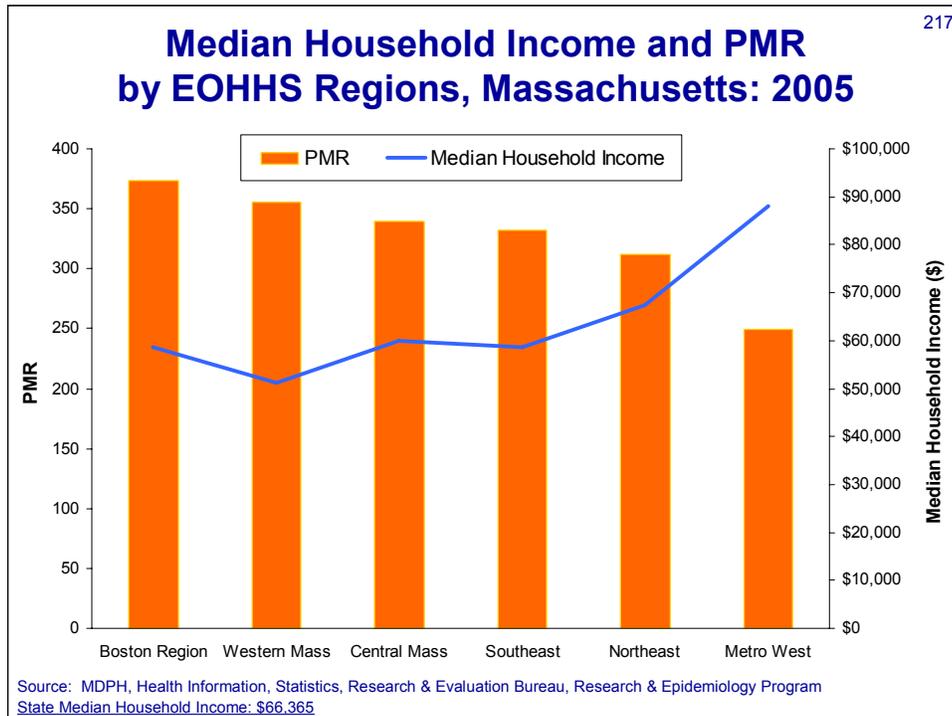
Massachusetts PMR= 317.0

Central Region PMR= 340.0



Rates are per 100,000 persons under 75 years of age, age-adjusted to the 2000 US standard population under 75 years of age.

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau



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Premature Mortality Rate (PMR) by EOHHS Regions: 2005

	PMR
Massachusetts	317.0
Western Region	355.0
Central Region	340.0
North East Region	311.5
Metro West Region	248.9
South East Region	332.3
Boston Region	373.1

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Key Health Observations in Central Massachusetts

- Racial and Ethnic disparities are major factors -
Latinos and Blacks health disparities across several indicators
are a major concern
- Overweight/obesity is an increasing health risk -
contributes to rising diabetes incidence
- The region's residents are disproportionately affected
by:
 - Infant mortality rates
 - Smoking rates
 - AIDS/HIV and Hep C
 - Heroin/opioid related incidents/deaths
 - Motor vehicle injuries

APPENDIX

REGIONS AND TOWNS

REGION	TOWN	COUNTY	CHNA
BOSTON	BOSTON	SUFFOLK	Alliance for Community Health
	BROOKLINE	NORFOLK	Alliance for Community Health
	CHELSEA	SUFFOLK	Alliance for Community Health
	REVERE	SUFFOLK	Alliance for Community Health
	WINTHROP	SUFFOLK	Alliance for Community Health
CENTRAL	ASHBURNHAM	WORCESTER	Fitchburg/Gardner CHN
	ASHBY	MIDDLESEX	Fitchburg/Gardner CHN
	AUBURN	WORCESTER	Community Wellness Coalition
	AYER	MIDDLESEX	Fitchburg/Gardner CHN
	BARRE	WORCESTER	Fitchburg/Gardner CHN
	BELLINGHAM	NORFOLK	Community Partners for Health
	BERLIN	WORCESTER	Fitchburg/Gardner CHN
	BLACKSTONE	WORCESTER	Community Partners for Health
	BOLTON	WORCESTER	Fitchburg/Gardner CHN
	BOYLSTON	WORCESTER	Community Wellness Coalition
	BRIMFIELD	HAMPDEN	CHN of Southern Worcester County
	BROOKFIELD	WORCESTER	CHN of Southern Worcester County
	CHARLTON	WORCESTER	CHN of Southern Worcester County
	CLINTON	WORCESTER	Fitchburg/Gardner CHN
	DOUGLAS	WORCESTER	Community Partners for Health
	DUDLEY	WORCESTER	CHN of Southern Worcester County
	EAST BROOKFIELD	WORCESTER	CHN of Southern Worcester County
	FITCHBURG	WORCESTER	Fitchburg/Gardner CHN
	FRANKLIN	NORFOLK	Community Partners for Health
	GARDNER	WORCESTER	Fitchburg/Gardner CHN
	GRAFTON	WORCESTER	Community Wellness Coalition
	GROTON	MIDDLESEX	Fitchburg/Gardner CHN
	HARDWICK	WORCESTER	Fitchburg/Gardner CHN
	HARVARD	WORCESTER	Fitchburg/Gardner CHN
	HOLDEN	WORCESTER	Community Wellness Coalition
	HOLLAND	HAMPDEN	CHN of Southern Worcester County
	HOPEDALE	WORCESTER	Community Partners for Health
	HUBBARDSTON	WORCESTER	Fitchburg/Gardner CHN
	LANCASTER	WORCESTER	Fitchburg/Gardner CHN
	LEICESTER	WORCESTER	Community Wellness Coalition
	LEOMINSTER	WORCESTER	Fitchburg/Gardner CHN
	LUNENBURG	WORCESTER	Fitchburg/Gardner CHN
	MEDWAY	NORFOLK	Community Partners for Health
	MENDON	WORCESTER	Community Partners for Health
	MILFORD	WORCESTER	Community Partners for Health
MILLBURY	WORCESTER	Community Wellness Coalition	
MILLVILLE	WORCESTER	Community Partners for Health	
NEW BRAINTREE	WORCESTER	Fitchburg/Gardner CHN	
NORTH BROOKFIELD	WORCESTER	CHN of Southern Worcester County	
NORTHBRIDGE	WORCESTER	Community Partners for Health	
OAKHAM	WORCESTER	Fitchburg/Gardner CHN	

	MAYNARD MEDFIELD MILLIS MILTON NATICK NEEDHAM NEWTON NORFOLK NORTHBOROUGH NORWELL NORWOOD PLAINVILLE QUINCY RANDOLPH SCITUATE SHARON SHERBORN SOMERVILLE SOUTHBOROUGH STOW SUDBURY WALPOLE WALTHAM WATERTOWN WAYLAND WELLESLEY WESTBOROUGH WESTON WESTWOOD WEYMOUTH WILMINGTON WINCHESTER WOBURN WRENTHAM	MIDDLESEX NORFOLK NORFOLK NORFOLK MIDDLESEX NORFOLK MIDDLESEX NORFOLK NORFOLK WORCESTER PLYMOUTH NORFOLK NORFOLK NORFOLK NORFOLK PLYMOUTH NORFOLK MIDDLESEX MIDDLESEX WORCESTER MIDDLESEX MIDDLESEX NORFOLK MIDDLESEX MIDDLESEX NORFOLK WORCESTER MIDDLESEX NORFOLK NORFOLK MIDDLESEX MIDDLESEX NORFOLK MIDDLESEX MIDDLESEX NORFOLK	CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance CHN of Greater Metro West West Suburban Health Network West Suburban Health Network CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance Blue Hills Community Health Alliance CHN of Greater Metro West Blue Hills Community Health Alliance Blue Hills Community Health Alliance Blue Hills Community Health Alliance Blue Hills Community Health Alliance CHN of Greater Metro West Greater Cambridge/Somerville CHN CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West West Suburban Health Network Greater Cambridge/Somerville CHN CHN of Greater Metro West West Suburban Health Network CHN of Greater Metro West West Suburban Health Network West Suburban Health Network Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN CHN of Greater Metro West
NORTHEAST	AMESBURY ANDOVER BEVERLY BILLERICA BOXFORD CHELMSFORD DANVERS DRACUT DUNSTABLE ESSEX EVERETT GEORGETOWN GLOUCESTER GROVELAND HAMILTON HAVERHILL	ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX ESSEX MIDDLESEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX	Greater Haverhill CHN Greater Lawrence CHN Community Health Network North Greater Lowell CHN Greater Haverhill CHN Greater Lowell CHN North Shore CHN Greater Lowell CHN Greater Lowell CHN Community Health Network North North Suburban Health Alliance Greater Haverhill CHN Community Health Network North Greater Haverhill CHN Community Health Network North Greater Haverhill CHN

	IPSWICH LAWRENCE LOWELL LYNN LYNNFIELD MALDEN MANCHESTER MARBLEHEAD MEDFORD MELROSE MERRIMAC METHUEN MIDDLETON NAHANT NEWBURY NEWBURYPORT NORTH ANDOVER NORTH READING PEABODY READING ROCKPORT ROWLEY SALEM SALISBURY SAUGUS STONEHAM SWAMPSCOTT TEWKSBURY TOPSFIELD TYNGSBOROUGH WAKEFIELD WENHAM WEST NEWBURY WESTFORD	ESSEX ESSEX MIDDLESEX ESSEX ESSEX MIDDLESEX ESSEX ESSEX MIDDLESEX MIDDLESEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX ESSEX ESSEX MIDDLESEX	Community Health Network North Greater Lawrence CHN Greater Lowell CHN North Shore CHN North Shore CHN North Suburban Health Alliance Community Health Network North North Shore CHN North Suburban Health Alliance North Suburban Health Alliance Greater Haverhill CHN Greater Lawrence CHN Greater Lawrence CHN North Shore CHN Greater Haverhill CHN Greater Haverhill CHN Greater Lawrence CHN North Suburban Health Alliance North Shore CHN North Suburban Health Alliance Community Health Network North Greater Haverhill CHN North Shore CHN Greater Haverhill CHN North Shore CHN North Suburban Health Alliance North Shore CHN Greater Lowell CHN Community Health Network North Greater Lowell CHN North Suburban Health Alliance Community Health Network North Greater Haverhill CHN Greater Lowell CHN
SOUTHEAST	ABINGTON ACUSHNET ATTLEBORO AVON BARNSTABLE BERKLEY BOURNE BREWSTER BRIDGEWATER BROCKTON CARVER CHATHAM CHILMARK DARTMOUTH DENNIS DIGHTON	PLYMOUTH BRISTOL BRISTOL NORFOLK BARNSTABLE BRISTOL BARNSTABLE BARNSTABLE PLYMOUTH PLYMOUTH PLYMOUTH BARNSTABLE DUKES BRISTOL BARNSTABLE BRISTOL	Greater Brockton CHN Greater New Bedford CHN Health & Education Response Greater Brockton CHN Cape and Islands CHN Health & Education Response Cape and Islands CHN Cape and Islands CHN Greater Brockton CHN Greater Brockton CHN South Shore Community Partners in Prevention Cape and Islands CHN Cape and Islands CHN Greater New Bedford CHN Cape and Islands CHN Health & Education Response

DUXBURY	PLYMOUTH	South Shore Community Partners in Prevention
EAST BRIDGEWATER	PLYMOUTH	Greater Brockton CHN
EASTHAM	BARNSTABLE	Cape and Islands CHN
EASTON	BRISTOL	Greater Brockton CHN
EDGARTOWN	DUKES	Cape and Islands CHN
FAIRHAVEN	BRISTOL	Greater New Bedford CHN
FALL RIVER	BRISTOL	Partners for a Healthier Community
FALMOUTH	BARNSTABLE	Cape and Islands CHN
FREETOWN	BRISTOL	Greater New Bedford CHN
GAY HEAD	DUKES	Cape and Islands CHN
GOSNOLD	DUKES	Cape and Islands CHN
HALIFAX	PLYMOUTH	South Shore Community Partners in Prevention
HANOVER	PLYMOUTH	South Shore Community Partners in Prevention
HANSON	PLYMOUTH	South Shore Community Partners in Prevention
HARWICH	BARNSTABLE	Cape and Islands CHN
HOLBROOK	NORFOLK	Greater Brockton CHN
KINGSTON	PLYMOUTH	South Shore Community Partners in Prevention
LAKEVILLE	PLYMOUTH	Health & Education Response
MANSFIELD	BRISTOL	Health & Education Response
MARION	PLYMOUTH	Greater New Bedford CHN
MARSHFIELD	PLYMOUTH	South Shore Community Partners in Prevention
MASHPEE	BARNSTABLE	Cape and Islands CHN
MATTAPOISETT	PLYMOUTH	Greater New Bedford CHN
MIDDLEBOROUGH	PLYMOUTH	Health & Education Response
NANTUCKET	NANTUCKET	Cape and Islands CHN
NEW BEDFORD	BRISTOL	Greater New Bedford CHN
NORTH ATTLEBORO	BRISTOL	Health & Education Response
NORTON	BRISTOL	Health & Education Response
OAK BLUFFS	DUKES	Cape and Islands CHN
ORLEANS	BARNSTABLE	Cape and Islands CHN
PEMBROKE	PLYMOUTH	South Shore Community Partners in Prevention
PLYMOUTH	PLYMOUTH	South Shore Community Partners in Prevention
PLYMPTON	PLYMOUTH	South Shore Community Partners in Prevention
PROVINCETOWN	BARNSTABLE	Cape and Islands CHN
RAYNHAM	BRISTOL	Health & Education Response
REHOBOTH	BRISTOL	Health & Education Response
ROCHESTER	PLYMOUTH	Greater New Bedford CHN
ROCKLAND	PLYMOUTH	South Shore Community Partners in Prevention
SANDWICH	BARNSTABLE	Cape and Islands CHN
SEEKONK	BRISTOL	Health & Education Response
SOMERSET	BRISTOL	Partners for a Healthier Community
STOUGHTON	NORFOLK	Greater Brockton CHN
SWANSEA	BRISTOL	Partners for a Healthier Community
TAUNTON	BRISTOL	Health & Education Response
TISBURY	DUKES	Cape and Islands CHN
TRURO	BARNSTABLE	Cape and Islands CHN
WAREHAM	PLYMOUTH	Greater New Bedford CHN
WELLFLEET	BARNSTABLE	Cape and Islands CHN
WEST BRIDGEWATER	PLYMOUTH	Greater Brockton CHN
WEST TISBURY	DUKES	Cape and Islands CHN

	WESTPORT WHITMAN YARMOUTH	BRISTOL PLYMOUTH BARNSTABLE	Partners for a Healthier Community Greater Brockton CHN Cape and Islands CHN
WESTERN	ADAMS AGAWAM ALFORD AMHERST ASHFIELD ATHOL BECKET BELCHERTOWN BERNARDSTON BLANDFORD BUCKLAND CHARLEMONT CHESHIRE CHESTER CHESTERFIELD CHICOPEE CLARKSBURG COLRAIN CONWAY CUMMINGTON DALTON DEERFIELD EAST LONGMEADOW EASTHAMPTON EGREMONT ERVING FLORIDA GILL GOSHEN GRANBY GRANVILLE GREAT BARRINGTON GREENFIELD HADLEY HAMPDEN HANCOCK HATFIELD HAWLEY HEATH HINSDALE HOLYOKE HUNTINGTON LANESBOROUGH LEE LENOX LEVERETT LEYDEN	BERKSHIRE HAMPDEN BERKSHIRE HAMPSHIRE FRANKLIN WORCESTER BERKSHIRE HAMPSHIRE FRANKLIN HAMPDEN FRANKLIN FRANKLIN FRANKLIN BERKSHIRE HAMPDEN HAMPSHIRE HAMPDEN BERKSHIRE FRANKLIN FRANKLIN HAMPSHIRE BERKSHIRE FRANKLIN FRANKLIN HAMPSHIRE BERKSHIRE FRANKLIN FRANKLIN HAMPSHIRE HAMPDEN HAMPSHIRE BERKSHIRE FRANKLIN BERKSHIRE FRANKLIN HAMPSHIRE HAMPSHIRE HAMPSHIRE FRANKLIN FRANKLIN FRANKLIN FRANKLIN HAMPSHIRE HAMPSHIRE HAMPSHIRE FRANKLIN FRANKLIN BERKSHIRE HAMPDEN HAMPSHIRE BERKSHIRE BERKSHIRE BERKSHIRE FRANKLIN FRANKLIN	CHN of Berkshire The Community Health Connection CHN of Berkshire Partnership for Health in Hampshire County Upper Valley Health Web Upper Valley Health Web CHN of Berkshire Partnership for Health in Hampshire County Upper Valley Health Web The Community Health Connection Upper Valley Health Web Upper Valley Health Web CHN of Berkshire Four (For) Communities Partnership for Health in Hampshire County Four (For) Communities CHN of Berkshire Upper Valley Health Web Upper Valley Health Web Partnership for Health in Hampshire County CHN of Berkshire Upper Valley Health Web CHN of Berkshire Upper Valley Health Web Partnership for Health in Hampshire County Partnership for Health in Hampshire County The Community Health Connection CHN of Berkshire Upper Valley Health Web Partnership for Health in Hampshire County The Community Health Connection CHN of Berkshire Partnership for Health in Hampshire County Upper Valley Health Web Partnership for Health in Hampshire County The Community Health Connection CHN of Berkshire Upper Valley Health Web Partnership for Health in Hampshire County CHN of Berkshire CHN of Berkshire CHN of Berkshire Upper Valley Health Web Upper Valley Health Web

LONGMEADOW	HAMPDEN	The Community Health Connection
LUDLOW	HAMPDEN	Four (For) Communities
MIDDLEFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
MONROE	FRANKLIN	Upper Valley Health Web
MONSON	HAMPDEN	The Community Health Connection
MONTAGUE	FRANKLIN	Upper Valley Health Web
MONTEREY	BERKSHIRE	CHN of Berkshire
MONTGOMERY	HAMPDEN	The Community Health Connection
MOUNT WASHINGTON	BERKSHIRE	CHN of Berkshire
NEW ASHFORD	BERKSHIRE	CHN of Berkshire
NEW MARLBOROUGH	BERKSHIRE	CHN of Berkshire
NEW SALEM	FRANKLIN	Upper Valley Health Web
NORTH ADAMS	BERKSHIRE	CHN of Berkshire
NORTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
NORTHFIELD	FRANKLIN	Upper Valley Health Web
ORANGE	FRANKLIN	Upper Valley Health Web
OTIS	BERKSHIRE	CHN of Berkshire
PALMER	HAMPDEN	The Community Health Connection
PELHAM	HAMPSHIRE	Partnership for Health in Hampshire County
PERU	BERKSHIRE	CHN of Berkshire
PETERSHAM	WORCESTER	Upper Valley Health Web
PHILLIPSTON	WORCESTER	Upper Valley Health Web
PITTSFIELD	BERKSHIRE	CHN of Berkshire
PLAINFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
RICHMOND	BERKSHIRE	CHN of Berkshire
ROWE	FRANKLIN	Upper Valley Health Web
ROYALSTON	WORCESTER	Upper Valley Health Web
RUSSELL	HAMPDEN	The Community Health Connection
SANDISFIELD	BERKSHIRE	CHN of Berkshire
SAVOY	BERKSHIRE	CHN of Berkshire
SHEFFIELD	BERKSHIRE	CHN of Berkshire
SHELBURNE	FRANKLIN	Upper Valley Health Web
SHUTESBURY	FRANKLIN	Upper Valley Health Web
SOUTH HADLEY	HAMPSHIRE	Partnership for Health in Hampshire County
SOUTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
SOUTHWICK	HAMPDEN	The Community Health Connection
SPRINGFIELD	HAMPDEN	The Community Health Connection
STOCKBRIDGE	BERKSHIRE	CHN of Berkshire
SUNDERLAND	FRANKLIN	Upper Valley Health Web
TOLLAND	HAMPDEN	The Community Health Connection
TYRINGHAM	BERKSHIRE	CHN of Berkshire
WARE	HAMPSHIRE	Partnership for Health in Hampshire County
WARWICK	FRANKLIN	Upper Valley Health Web
WASHINGTON	BERKSHIRE	CHN of Berkshire
WENDELL	FRANKLIN	Upper Valley Health Web
WEST SPRINGFIELD	HAMPDEN	The Community Health Connection
WEST STOCKBRIDGE	BERKSHIRE	CHN of Berkshire
WESTFIELD	HAMPDEN	Four (For) Communities
WESTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
WHATELY	FRANKLIN	Upper Valley Health Web

	WILBRAHAM WILLIAMSBURG WILLIAMSTOWN WINDSOR WORTHINGTON	HAMPDEN HAMPSHIRE BERKSHIRE BERKSHIRE HAMPSHIRE	The Community Health Connection Partnership for Health in Hampshire County CHN of Berkshire CHN of Berkshire Partnership for Health in Hampshire County
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DATA SOURCES

Massachusetts Division of Health Care Finance and Policy

MDPH, Bureau of Communicable Disease Control

MDPH, Bureau of Substance Abuse Services

MDPH, Environmental Health Bureau

MDPH, Health Information, Statistics, Research & Evaluation Bureau

SAMHSA, Office of Applied Studies